“EFFECTIVENESS OF VIDEO ASSISTED TEACHING PROGRAMME ON KNOWLEDGE REGARDING OCCUPATIONAL HAZARDS AND ITS PREVENTION AMONG COTTON MILL WORKERS AT SELECTED INDUSTRIES, SALEM”.

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CERTIFICATE

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TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF ANNEXURES

ABSTRACT

Occupational hazard is one of the most important health problems in the world, especially in developing countries. WHO estimated that about 200,000 per year people are affected with occupational hazards.

A study was conducted to assess the effectiveness of video assisted teaching programme on knowledge regarding occupational hazards and its prevention among cotton mill workers at selected Industries, Salem. The design adopted was quasiexperimental (pre and post test with control group) research design. Settings of the study was Kandagiri spinning mill Udayapatti, Unit-I as experimental group and Unit-II Mettupatti, Salem as control group. The sample size was 60 and selected through non-probability convenience sampling technique by using structured interview schedule. Samples were analysed by descriptive and inferential statistical methods and interpretation were made based on the objectives.

In experimental group, 5(16.67%) had moderately adequate knowledge and majority of them 25(83.33%) had inadequate knowledge during pre test. During post test highest percentage of the samples 20(66.67%) had adequate knowledge, and 10(33.33%) had moderately adequate knowledge. In control group, 3(10%) had moderately adequate knowledge and majority of them 27(90%) had inadequate knowledge during pre test. During post test, 5(16.67%) had moderately adequate knowledge and majority of them 25(83.33%) had inadequate knowledge. The mean difference on knowledge regarding occupational hazards and its prevention in experimental group before and after intervention was 12.37 and the estimated paired 't' value 5.30 was significantly higher than the table value 2.05 at $p \leq 0.05$ level. Hence H_1 was retained. The post test mean difference on knowledge regarding occupational hazards and its prevention between the experimental and control group was 13.05 and the estimated independent't' value 13.36 was significantly higher than the table value 2.75 at $p \leq 0.05$ level. Hence $H_2$was retained, which showed that the video assisted teaching programme was effective in improving the knowledge regarding occupational hazards and its prevention. There was no significant association between the pre test scores on knowledge regarding occupational hazards and its prevention among cotton mill workers and their selected demographic variables. Hence, hypothesis H_3 was rejected at $p \geq 0.05$ level.

CHAPTER- I

INTRODUCTION

"Working may be an occupational hazard to you. Not working is an occupational hazard to the country."

(12 Eustace 8:5)

Work is considered as a basic part of human existence. Most of the adults spend approximately one-third to one-fourth of their life time at work and often perceives work as a part of their self identity, self-expression and self-fulfilment. Many people believe that work is worship, equally important is the place of work because the workplace has significant influence on individual's health and is a primary site for the delivery of preventive health care. **(Rogers, 2006)**

The level of occupational health and safety, socioeconomic development of a country, quality of life and wellbeing of working people are not only closely linked with each other but also influence each other. This suggests that intellectual and economic inputs on occupational health care are not burdens but have a positive and productive impact on the company and national economy. Some industries and countries have demonstrated that it is technically feasible and economically productive to prevent and minimize hazards at work. This occupational health is an important factor for sustainable socio-economic development that enables workers to enjoy a healthy and productive life both throughout their active working years and beyond, especially after their retirement. **(WHO, 2005)**

Textile industry is one of the leading industries both in India and in the world at large. Nearly 14% of the total industrial production comes from textile industry and it forms around 3% of GNP in India. After Indian railways, Indian textile industry seems to generate more employment. **(India Business Directory, 2010)**

The current global labour force stands at about 2600 million and is growing continuously. Approximately 75% of these working people are in developing countries. The officially registered population constitutes 60-70% of the world's adult male and 30-60% of the world's adult female population. Each year another 40 million people join the labour force and most of them are in developing countries. It is imperative therefore to realize that workplace environmental hazards are a threat to a large proportion of the world population.

Occupational health is a branch of Community Medicine which deals with the effects of occupation of workplace on human health **(Park. JE, 2009)**. Every occupation is associated with one or other ill effects on health. One such occupational group is cotton textile workers. **(Hunter's Disease of Occupation, 2008)**

The major health problems associated with cotton dust are respiratory problems, which include Byssinosis, *pneumonitis* and Emphysema. The problems are highly prevalent in the mills of developing countries. **(Fantahum and Adebe, 2009)**

Byssinosis is an occupational lung disease often observed among workers exposed to cotton dust. Despite the fact that byssinosis has been recognized for over 100 years, the etiology and pathogenesis remain obscure. The ability of textile fibres to produce byssinosis is determined by fibre type-cotton being the most potent, followed by flax, hemp. Harvested cotton consists of a mixture of plant materials including leaves, bracts and stems, fibre, bacteria, fungi, and other contaminants. Very importantly, the compounds which cause byssinosis are water soluble. The biological activity of cotton can be greatly reduced by either steaming or washing the cotton before processing the textile work. **(David, 2006)**

The occurrence of respiratory symptoms represents the earliest response to cotton dust exposure, followed by lung function changes. Early respiratory symptoms

may be a risk factor for subsequent loss of pulmonary function in cotton textile workers. **(David, 2006)**

The severity and extent of problem are well recognized in the developed countries and control measures have been implemented to prevent the disease. This is not true, however, for developing countries where the severity and extent of the problem are not well studied and preventive measure are far from adequate. **(J.R.Parikh, 2007)**

The occupational health nurse plays an important role in maintaining health and safety of employees by assessing the work site for hazards and reducing risk that could lead to disastrous situations. More effort could be directed at integrating promotion of health and health protection activities to provide with an environment more conducive especially to general health of the workers, so that the work site offers an excellent setting to focus on both health protection and health promotion. **(Blix, 2009)**

Need for the Study:

Occupational health is concerned with health in its relation to work and the working environment. Occupational health implies not only health protection but also health promotion, emergency care, wide range of preventive, curative services, rehabilitative services, a concept which includes everything that can apply to promote health and working capacity of the workers.

Occupation health is a branch of community medicine which deals with the effects of occupation or workplace on human health. We have already seen that every occupation is associated with one or the other ill effects on health and cotton mill workers are not an exception to this fact. These workers are susceptible to various morbid conditions by virtue of workplace and working conditions. These morbid

conditions may range from chronic respiratory diseases due to cotton dust inhalation to anaemia because of nutritional deficiency. Although many studies on chronic respiratory disease among cotton mill workers have been carried out, a study including complete health profile of cotton mill workers is limited and is need of further research. **(Indian Journal of Occupational and Environmental Medicine, 2010)**

An occupation is something in which persons not only earn their daily bread but also spend one-third of average adult life. The Bureau of Labour Statistics reports that every 5 seconds a worker is injured in the world and every one second a worker is temporarily or permanently disabled in India. The Centre for disease control and prevention reported in 2006 that every day and average of 137 persons die from injuries on the job. Each year 74000 require treatment in hospital emergency departments for work related injuries. **(Girijakumari, 2009)**

According to a recent estimate, the cost of work related to heat loss and associated productivity loss may amount to several percent of the total gross national product of a country. In India there are about 20 million workers who are involved in textile industry, among them 1.07 million workers are engaged in the manufacture of cotton textile. Byssinosis, hypertension, noise induced hearing loss, dermatitis and risk of cancer due to various chemicals and dyes are common occupational diseases found among weavers. In a study done by NGO in 2008, byssinotic condition was first recorded in Indian history in the last 150 years. A maximum number of Byssinosis is a respiratory syndrome that occurs as a result of inhaling dust that is produced when cotton is inhaled. The occupational nurse should realize that the primary concern to protect the health of working population.

A longitudinal study was conducted to assess the prevalence of byssinosis and to find out the association between smoking and byssinosis. 344 samples were taken among the textile workers. The synergistic effect of smoking on cotton dust exposure was evaluated. Indeed, smoking had significantly higher frequency than non-smoking. In the survey conducted, it was observed that the frequency of respiratory symptoms and prevalence of severe byssinosis were 14.9% and 12.6% respectively. The reduction of symptoms was due to the old cotton mill. The reality is lower in the case of non-smokers. The result indicated that smoking potenitates' byssinosis and smoking was found to show an additive effect of cotton dust exposure. **(Maunder, LR, 2007)**

A study was conducted to determine the effect of past cotton dust exposure on the respiratory tract; a total of 223 persons working in textile mills were included in this study. A questionnaire was used to enquire about respiratory problems, the participants underwent using several spirometric measurement. The most common respiratory problem was pneumonitis 14.3%, the prevalence of byssinosis was only 20.2% and emphysema was 11% in cotton processing workers. **(Basel, K.A, 2008)**

The jobs and tasks in textile mills varied according to the product, process and operations since the subjects were selected from four sections, such as the blow and card room, spinning mills, finishing section and general section. The symptoms of respiratory illness were identified as highest among the workers in the blow and card room, and in the spinning section. In all, 53% of the workers have had such symptoms that had a low peak expiratory flow rate (< 290 litres/minute). The differences of mean peak expiratory flow rate were highly significant (409 litres/minute) between those who had respiratory problems, and who had no such symptoms (504 litres/ minute). The occurrences of such problems were also significant in the production

section compared with the subjects in the general section because no one had the symptoms of chest tightness or breathlessness from the general section. However, many of them had symptoms of cough with or without phlegm (e.g. 43%), symptoms of pneumonitis (6%) and also chest tightness and /or breathlessness (4%). **(Taylor, et.al, 2010)**

Regular smoking was significantly associated with the occurrence of respiratory related illness and its symptoms. A number of 'beedi' (the name of a local cigarette stick that contains more nicotine than usual cigarettes) smokers worked in the production section. They smoked 2 to 25 sticks (a mean of 13 sticks) per day. Non- smokers were less likely to be affected, but many of them suffered from casual fever (20%) and also morning headaches (8%).

Prevalence of other health problems were also identified as restlessness at night (24%), daytime sleepiness (11%), snoring (19%), impotence (31%), and feeling physically weak (10%). The prevalence of hypertension (14%) was also noted among some workers. Only 16% of the workers in the production section had been using masks for more than 5-7 years, and no significant association was found between the symptoms of respiratory illness and the length of their service. However, some evidence from their health record (personally kept at home and from doctor's prescription) proved that symptoms of respiratory illness were suspected among those who were working for more than six-year duration. **(Jackson, 2008)**

Prevention of occupational hazards as an essential component of health aims at training and educating these workers in order to promote good health. It is extremely important to make people aware of the concerns of workplace. One of the major responsibilities of community health nurse is to impart knowledge related to specific measure in preventing occupational hazards. It is the Community health nurse

who can play a vital role in preventing and controlling occupational hazards. Therefore, she/he should function independently and carry out this particular responsibility for better health of the workers. **(Pyuish Gupta, 2010)**

Statement of the Problem:

A Study to assess the Effectiveness of Video Assisted Teaching Programme on Knowledge Regarding Occupational Hazards and its Prevention among Cotton Mill Workers at Selected Industries, Salem.

Objectives:

1. To assess the knowledge regarding occupational hazards and its prevention among cotton mill workers in experimental group and control group.
2. To determine the effectiveness of video assisted teaching programme regarding occupational hazards and its prevention among cotton mill workers in experimental group.
3. To associate between the pre test scores on knowledge regarding occupational hazards and its prevention among cotton mill workers and their selected demographic variables in experimental group and control group.

Operational Definitions:

Effectiveness:

Effectiveness is a measure of the ability of video assisted teaching programme regarding occupational hazards and its prevention among cotton mill workers to produce a specific desired effect or result that can be quantitatively measured.

Video Assisted Teaching Programme:

It is a systematically planned teaching programme on occupational hazards and its prevention and imparted through video film based lecture cum discussion.

Knowledge:

It is the correct response given by the cotton mill workers regarding occupational hazards and its prevention which can be assessed through structured interview schedule.

Occupational Hazards:

It is a state of deviation from normal status of health to illness while working in cotton mill industry. In this study it includes physical hazards, chemical hazards, and mechanical hazards, psychosocial hazards of Byssinosis, pneumonitis, and emphysema.

Prevention:

It refers to precautionary measures to be followed by cotton mill workers to protect their health from occupational hazards.

Cotton Mill Workers:

They are the adult employees working at selected cotton industries, Salem.

Assumptions:

1. The cotton mill workers may have knowledge regarding occupational hazards and its prevention.
2. Video assisted teaching programme may improve their knowledge regarding occupational hazards and its prevention among cotton mill workers.
3. Increased level of knowledge among cotton mill workers regarding occupational hazards and its prevention may help them to improve their quality of life.

Hypotheses:

H_1: There will be significant differences in pre test and post test scores on knowledge before and after video assisted teaching programme regarding occupational hazards and its prevention among cotton mill workers in experimental group at $p \leq 0.05$ level.

H_2: There will be significant difference in post test scores on knowledge after video assisted teaching programme regarding occupational hazards and its prevention among cotton mill workers in experimental group and control group at $p \leq 0.05$ level.

H_3: There will be significant association between the pre test scores on knowledge regarding occupational hazards and its prevention among cotton mill workers and their selected demographic variables at $p \leq 0.05$ level.

Delimitations:

1. The study was limited to only 60 samples.
2. Study was limited to cotton mill workers who were available during the study period.
3. Study period was limited to 4 weeks.

Projected Outcome:

1. This study would reveal the existing knowledge on occupational hazards and its prevention among cotton mill workers.
2. This study would motivate the cotton mill workers to update their knowledge regarding occupational hazards and its prevention.
3. This study would evaluate the effectiveness of video assisted teaching programme on knowledge regarding occupational hazards and its prevention among cotton mill workers.

Conceptual Framework:

This study is to assess the effectiveness of video assisted teaching programme on knowledge regarding occupational hazards and its prevention among cotton mill workers. The conceptual framework for this study was based on J.W.KENNY's open system model.

According to Kenny, all the living systems are open and they are in continuous exchange of matters, energy and information.

The system receives input and gives back output in the form of information or knowledge.

System model consist of 3 phases input, throughput, and output. These 3 phases also known as classical element of the system.

Input:

It is the first phase in open system. Based on Kenny, input can be a matter of information. In this study, it is testing the knowledge on occupational hazards and its prevention among cotton mill workers by using structured interview schedule.

Throughput:

According to theorist, information is continuous process through the system. This is the activity phase, which allows the input to be changed. In the present study, providing video assisted teaching programme regarding occupational hazards and its prevention among cotton mill workers, only to the experimental group.

Output:

According to Kenny after processing the input, the system gives output (Information/ knowledge). It is the third element of the system, where alteration can be expected because of the throughput.

In this study, majority of the cotton mill workers had gained adequate and moderately adequate knowledge regarding occupational hazards and its prevention in experimental group. There was no significant change in the knowledge regarding occupational hazards and its prevention among cotton mill workers in control group.

Feedback:

According to throughput, feedback is the improvement of knowledge among cotton mill workers. In this study, improved knowledge regarding occupational hazards and its prevention among cotton mill workers in experimental group was assessed by the investigator.

If there is no significant changes in the output, feedback will return to input and the process will continue which is not included in the study.

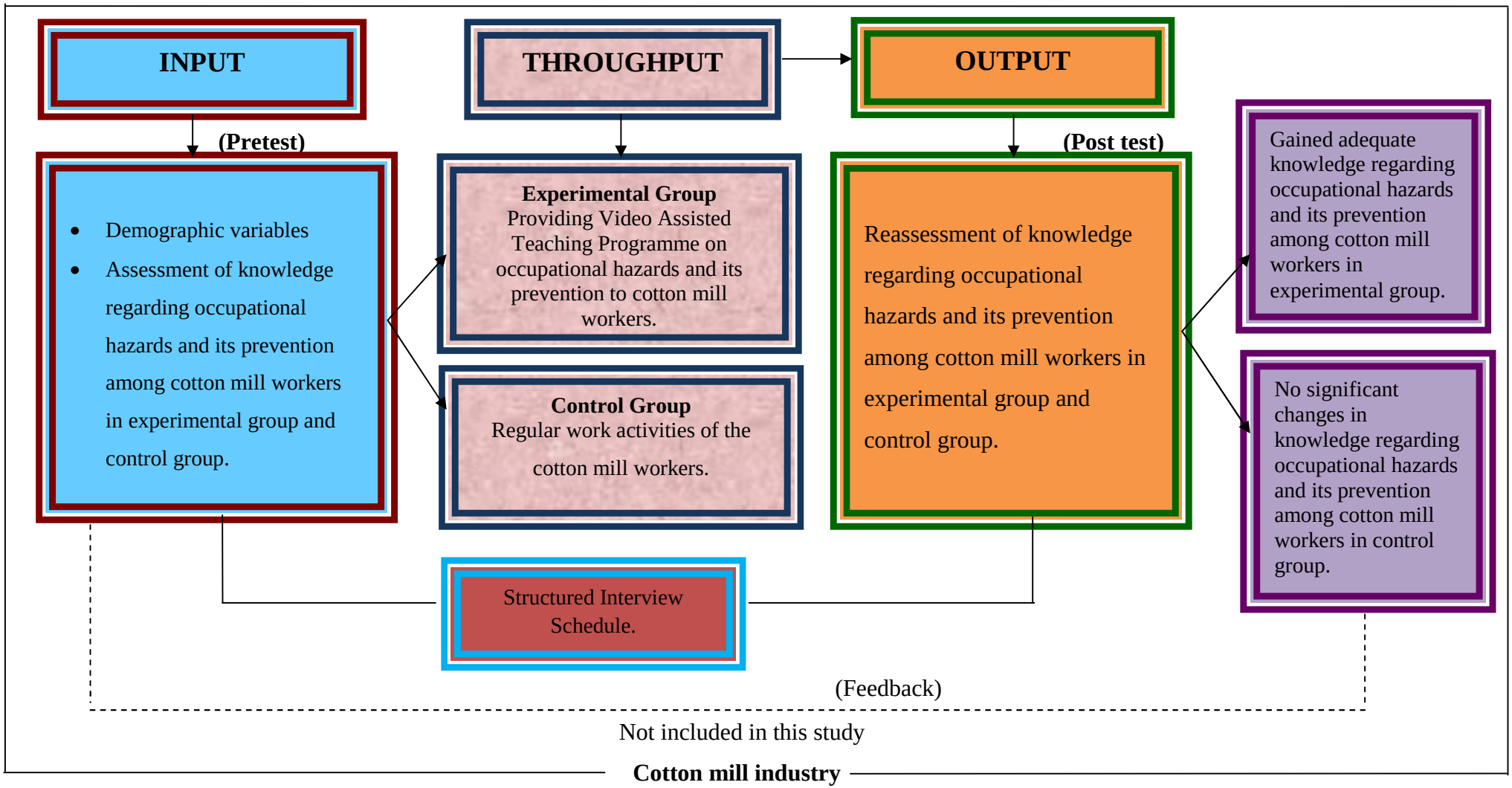

Fig-1.1 : Conceptual Framework Based On Modified J.W. Kenny's Open System Model On Effectiveness Of Video Assisted Teaching Programme On Knowledge Regarding Occupational Hazards And Its Prevention Among Cotton Mill Workers.

Summary:

This chapter dealt with introduction, need for the study, and statement of the problem, objectives, operational definition, assumptions, delimitations, projected outcome and the conceptual frame work.

CHAPTER-II

REVIEW OF LITERATURE

Review of literature is an important step in the development of research project and in broadening the understanding and developing an insight into the problem area. It further helps in developing the broad context, in which the problem fits, methodology, instruction of tool, development of evaluative approach and analysis of data.

Literature review is a critical summary of research on a topic of interest often prepared to put a research problem in context. (**Denise. F. Polit, 2011)**

The review of literature in this chapter is presented under the following headings.

1. Literature related to occupational hazards.
2. Literature related to respiratory problems in cotton mills.
3. Literature related to occupational hazards and its prevention.

1. Literature related to occupational hazards:

An analytical study was conducted in a textile mill that situated in Faisalabad. Their selection of mill was based upon the facts that the mill had 6500 workers at the same time and it was working round the clock. A sampling frame was chosen covering only male workers of age 19-60 years with at least 2 years of service but emphasized was on more than 10 years of work experience in the textile mill. First two shifts were selected all workers were interviewed using a standard questionnaire. They concluded that byssinosis usually begins to appear after several years of exposure. The results showed that 14.42% (29) workers had started showing the symptoms of byssinosis. There were 16(8%) workers in declutching department. In blow room there were 6 (3%) diseased workers. Five (2.48%) diseased workers were observed in card room and 2 (1%) were observed in spinning room. Out of these 29

workers, 16 belong to ages 41-50. This is the period of age when social responsibilities are at peak and also on decline of age. Certainly in the absence of health and safety act at work, no compensation is awarded to such sick workers suffering from byssinosis purely to the occupational reasons. (**Saleema, et.al, 2007**)

An analytical study was conducted based on the chronic disability, to discover about the records of disable people working in industry, excluding for those who were registered with the department of employment and productivity. A combined survey conducted by six factory doctors consisting of 11,399 men of aged 16-64 from seven companies is illustrated. In which 18 % of the population (1233 men) were recognised as having chronic medical impairments, which could affect working capability. The frequency increased from 3% under the age of 25 years to 28% over the age of 60($P<0.05$). The only 1/3 of these men was formally registered and they were not true representative of the entire disabled either in terms of severity of diagnosis. The result showed that most occurring reason of disablement was pneumonitis, emphysema, and asthma, disorders of the backbone, coronary heart disease and sever hearing loss**. (Taylor, et.al, 2006)**

An observational study to investigate the risk of mortality in a group of textile workers and observe whether specific occupational exposure was connected with mortality. These workers may be affected to textile dusts, a broad series of chemicals and electromagnetic radiation. The statistics of present and previous members of a textile industry union were taken out from membership cards and coordinated with the National Death Index for obtaining date and reason of death. The 113 deaths were occurred in the cohort of 7684 textile workers. Both male and female textile workers had same risk of death from any reason, cancer or cardiovascular disease to the general population. As compared to women, male workers had greater risk of death

from injury. There were no significant data which reveals considerable increase in risk with particular occupational exposures. (**Frits Chi et Al, 2004)**

A quasi experimental study was conducted among workers of spinning mills are exposed to many occupational hazards which may contribute to disease and work injuries. The main aim of this study was to evaluate the effect of health promotion programme to improve health of workers in spinning mill. The sample comprised of 350 workers. Simple random technique was used. Tool used for this study was interviewing questionnaire and observational checklist. Result showed that two thirds of studied workers were exposed to respiratory disorders (65.7%and 62.8%). More than half of the studied workers were exposed to hearing disorders (50.5%). More than two fifths were complaining from chronic cough (42.8%), nearly two thirds of the studied workers had poor knowledge about different types of protective equipment and occupational diseases in spinning mill, almost two thirds of the studied workers (67.1%) complained from musculoskeletal disorders, (56.1%) from hypertension. There were statistically significant difference between before and after programme implementation concerning workers health ($P<0.01$). **(Sahar Ahmed Shafik, 2012)**

A Quantitative correlational study was conducted in selected spinning mill industry at Erode. The conceptual frame work used for the study was “Roys Adaptation Model”. Tools used for this study were:1) Rating scale to assess the occupational stress and 2) checklist to assess the coping. The validity of the tool done by five experts and reliability of the tool was checked $r=0.8$ and $r=0.92$ respectively for both tools. Pilot study was conducted with 6 samples. Samples who met the inclusive criteria were selected through non-probability convenient sampling technique. The sample size was 60.The settings of the study were golden spinning mill, and Murugavel Spinning Mill, Erode. Average time spent for each sample was

approximately 20 minutes and data collected from 6 samples per day. Booklet on methods to overcome occupational stress was distributed to all samples. The data were edited for completion. The result showed that majority of married women were in the age group of 30-35 years21(35%) had higher secondary level of education 21(35%) were from nuclear family 29(48.3%)had family support 38(63.3%)reported their husbands did not share in household activities 28(46.7%) had their last child in the age of 3-6 years 18(30%)were from urban area 31(51.7%)had a distance of 5-15kms from the residence to workplace 21(35%) travelled for 10- 15 minutes 27(45%) had a monthly income of 5000 23 (38%)experienced stress in spinning mill.**(Kavitha N.M, 2011)**

2. Literature related to respiratory problems in cotton mills:

An analytical study was conducted to investigate the prevalence of respiratory problems, in particular byssinosis, and to explore factors associated with their occurrence among a group of 595 randomly selected workers representing 40.5% of those exposed to dusty operations in a typical Ethiopian cotton textile mill. A standard questionnaire on respiration was administered and pre and post shift forced vital capacity (FVC) and forced expiratory volume in one second (FEV1) were determined for each worker; workers found to have byssinosis and other respiratory diseases were compared with workers having no respiratory diseases in terms of the level and duration of exposure to cotton dust and other variables. We analysed multiple air samples from different sections in order to find out the elutriated cotton dust concentrations (0.86-3.52 mg/m3). The prevalence of byssinosis was 43.2% among blowers and 37.5% in carders in comparison with 4 to 24% among workers in other sections. Prevalence of pneumonitis ranged from 17.6 to 47.7% and Emphysema from 8.5 to 20.5% across all sections. Significant across shift decrements in FEV1 and FVC

were seen in those workers with respiratory tract diseases compared with those workers without such diseases. A significant dose response relation for pulmonary function and respiratory illnesses was also found by regression analysis. Preventive measures are proposed. Further research including a nationwide survey of textile mills is suggested. This is the first epidemiological study of the textile industry in Ethiopia. **(Ay Mgeni, 2007)**

A cross-sectional study was conducted in cotton mills in Guntur District (AP) in January 2009 to May 2009. Total 474 workers were included in the study. All study subjects were male. Most of the study subjects belonged to age group 30–40 years (56.96%) and lower socioeconomic status (36.09%) according to modified Kuppuswamy's classification. The literacy status was varied with 5.70% being illiterate and 37.13% were educated up to primary school. Most of workers were working in Ring frame (41.56%) and majority (58.44%) were working for the last 5–10 years. Mean height of study subjects was 147.42 cm and mean weight was 55.11 kg. The common morbid conditions found were eosinophilia (18.35%), iron deficiency anemia (28.90%), byssinosis grade 1(7.80%), dental stains (6.54%), refractive errors (7.80%), pneumonitis (4.85%), and upper respiratory tract infection (8.64%). **(Pravin N. Yerpude, 2010)**

A cross-sectional survey of 372 adult male textile workers from the spinning and weaving sections of 15 textile mills from Karachi. Data were collected from November to December 2009 through a structured, pretested questionnaire and spirometry. The Result showed that Prevalence of byssinosis was 10.5%, chronic cough 7.5%, chronic phlegm 12.9%, wheeze with shortness of breath 22.3%, shortness of breath (grade 2) 21%, chest tightness ever 33.3%; whereas, a low prevalence of asthma (4%) was identified in this population. Eight per cent had

obstructive, 8% restrictive and 2% mixed pattern of lung function abnormality. After controlling for potential confounders, work in the spinning section predicts frequent wheeze (AOR=2.0; 95% CI 1.1 to 3.5), wheeze with shortness of breath (AOR=1.8; 95% CI 1.0 to 3.4), and obstructive pattern on spirometry (AOR=2.5; 95% CI 1.0 to 6.2). Prolonged duration of work predicts breathlessness grade 1 (AOR=1.8; 95% CI 1.0 to 3.1) and grade 2 (AOR=2.7; 95% CI 1.3 to 5.4), as well as decrements in Forced Expiratory Volume in the first second (FEV_1) and FEV_1/Forced Vital Capacity ratio. Lack of education predicts frequent wheeze (AOR=2.0; 95% CI 1.2 to 3.3), and Sindhi ethnicity predicts chest tightness apart from during cold (AOR=2.7; 95% CI 1.1 to 6.6) Study highlights the burden of respiratory illnesses and symptoms, and a low prevalence of asthma among textile workers in Karachi. Work in the spinning section, lack of education, prolonged duration of work and Sindhi ethnicity, were identified as important risk factors. **(Zafar Fatmi, 2011)**

A Cross sectional study was conducted among 462 cotton textile workers of Central India. Interview technique was used to collect socio demographic, anthropometric & addiction information on a predesigned performa followed by detailed general and systemic examination. Result showed that present study revealed that among 462 samples (25.3%) workers had chronic respiratory morbidities. The morbidities included Byssinosis (11.7 %), pneumonitis (14%), Emphysema (11%), Tuberculosis (1.5%), other obstructive pulmonary diseases (1.7 %) All the workers were male and age ranged from 21 – 58 years. Majority of the study subjects i.e. 97.4 % were literate and 94.6% belonged to class III & IV according to modified Kuppuswamy's classification. The spinning process was carried out in seven main sections. Majority of the workers belonged to ring frame section (47%). The present study showed that (32.7%) had cotton dust exposure for more than 20 years. Only

masks were provided as protective devices and (41.3%) of the workers were using it. Total (34.7 %) workers were smokers. **(Ajeet Vasantrao Saroji, 2010)**

A Simple, randomized, prevalence study was conducted amongst 173 cotton mill worker in the age group 21 – 51 years in the period of four months at Nagpur Zilla Sahakari soot Girni and V.S.P.M's college of physiotherapy, workers with established cardiopulmonary disorders are excluded from study. Material used: Inch tape, Weighing scale, Height Scale, Wright's mini peak flow meter, pulmonary function testing equipment..Questionnaires collecting information about work, job, duration, addiction, symptom, work room environmental and safety measures was administered in local dialect to each worker on his first day of working week. It is concluded from the present study that with the increase of Age and Exposure there is decreased in PEFR, FEV_1 & FVC. Physical therapy intervention implies not only health protection but also promotes health. **(Jones RD, 2005**)

An analytical study to investigate the respiratory health profile of textile mill workers in Bangladesh, forced vital capacity was measured by peak expiratory flow rate instrument among 210 subjects. The personal history, occupational history and the state of health were also determined using a questionnaire and checklist. The subjects who had a considerably low peak expiratory flow rate (<290 liters/ min) and symptoms of chronic respiratory illness underwent x-ray examination. A statistically significant low peak expiratory flow rate was identified among 52.9% of workers. Among them 42.9% had symptoms of cough with or without phlegm, 57% had a history of pneumonitis and 4.3% experienced chest tightness or breathlessness. The study showed a high degree ($P<0.001$) of respiratory related illness symptoms among the workers in the blow/ card room and the workers in the spinning section. **(Ahmad S.A, 2005)**

An observational study to investigate the prevalence of byssinosis. In this study one hundred and sixty nine and one seventy five textile workers were enrolled in the first (1991) and second (1996) surveys to assess the prevalence of byssinosis. The synergistic effect of smoking on cotton dust exposure was evaluated although the difference in the second study (38.9%) was not statistically significant, smoke had significantly higher frequency than non- smoker in both surveys. The frequency of respiratory symptoms and prevalence of severe byssinosis is the second survey was (14.9% and 12.6%). The prevalence was higher in smokers than in non smokers found in the second survey. The result indicate that the second survey reveals that the high prevalence of byssinosis still smoking was found to show an effect of cotton dust exposure**. (Maunder LR, 2004)**

A Cross sectional study of respiratory symptoms and lung function was made in 1057 textile spinning operatives. Mostly 713 workers currently in cotton industry. The remainder worked with manmade fibre lung function was assessed by measuring forced expiratory volume in one second (FEV1) and forced vital capacity (FVC). Exposure to cotton dust was measured in the work area. It was estimated with accurate work history and best available hygiene data 3.5% of all operatives had byssinosis, 55(5.3%) pneumonitis, 36 (3.5%) work related persistent cough, 55(5.3%) non-byssinotic work related chest tightness and 56(5.3%) work related wheeze. A total of 212 static work area dust samples (range 0.04-3.23 mg/m3) and 213 personal breathing zone samples range (0.014.29.95 mg/m3) were collected. Percentage of predicted FEV1 was reduced in current smokers (mean 89.5, 95% confidence interval (95%& 88.91) in comparison with cotton(9738,96.6,-99.0).Regression analysis identified smoking($p<0.01$), increasing age ($p<0.01$) increasing time worked in the waste room ($p<0.01$) and male sex ($p<$ retrospective cotton dust exposure did not

appear as predictor FEVI was reduced in these operatives exposed to high dust co concentration assessed by personal and worker area sampling.(**Fishwick D, Fletcher AM, 2006)**

An Analytical study was conducted in the spinning mill of Karachi in June 2006. Mill workers who had worked for a period of minimum 5 years were selected. A sample size of 83 conveniently selected workers participated in the research study. Data collection was done through questionnaire, and pulmonary function tests. The result showed that the mean age of the sample was 30±69 years. Of all the workers 72% used safety gadgets (masks) while working and 50% availed overtime. Smokers amounted to 31% of the total employees. Around 35% workers complained of having respiratory ailments of which 19% (16 workers) closely matched byssinotic symptoms. Pulmonary Function Tests (PETs) confirmed 13 out of 16 workers to be byssinotics. The association of byssinosis with respect to work areas was significantly high in ring area (O.R=2.04) followed by carding (O.R=1.3). The association of byssinosis was also high in workers who did not use safety gadgets, e.g. dust masks (O.R=4.89) and in people who worked overtime (O.R=1.82). Associations with respect to duration of employment and smoking could not yield significant results. **(Mohammed Irfan Farooque, 2006)**

3. Literature related to occupational hazards and its prevention.

An analytical study to assess the excessive noise among spinning mill workers. Excessive noise is a global occupational health hazard with considerable social and physiological impacts, including noise-induced hearing loss (NIHL). This paper describes the worldwide morbidity of occupational NIHL in the year 2000. The proportion of the population exposed to occupational noise was estimated using noise exposure data from the US National Institute for Occupational Safety and Health

(NIOSH), adjusted by data on the distribution of the work force by occupational category and economic sector, and economic activity rates in each WHO sub region. These values for the exposed population and risk measures for NIHL were used to develop estimates of the attributable fraction (AF) of adult-onset hearing loss resulting from occupational noise exposure. The AFs were applied to WHO estimates of total disability-adjusted life years (DALYs) from adult-onset hearing loss to estimate the DALYs due to occupational noise. Result showed that Worldwide, 16% of the disabling hearing loss in adults (over 4 million DALYs) is attributed to occupational noise, ranging from 7% to 21% in the various sub regions at $P<0.01$. The effects of the exposure to occupational noise are larger for males than females in all sub regions and higher in the developing regions. Researcher Conclude that occupational noise is a significant cause of adult-onset hearing loss. The majority of this NIHL burden can be minimized by the use of engineering controls to reduce the generation of noise at its source. **(Marilyn Fingerhut, 2005)**

An analytical study was conducted to evaluate the musculoskeletal disorder among spinning mill workers in New York. In spite of the numerous reports on musculoskeletal disorders in various specific groups of workers, few data on the prevalence in the general working population are available except for back pain. We analyzed the information collected through a nationwide survey in Taiwan in 1994 to estimate the prevalence of musculoskeletal disorders by age, gender, and education level and identify high-risk industries. In the survey, a standard questionnaire was distributed to a representative sample of 22,475 non-self-employed workers in Taiwan. National estimates were obtained by applying a weight to each participant. Among the sampled workers, 18,942 (84.3%) participated, and 37.0% (standard error= 0.4%) had musculoskeletal disorders. The result showed that female workers

had a significantly higher overall prevalence than male workers (39.5% vs. 35.2%, $p<0.05$). Education and age also had significant associations with MSD ($p<0.001$ in both genders). “Lower back and waist” were the most frequently affected body parts (18.3% among males and 19.7% among females), but the prevalence of MSDs of the neck, shoulders, hands and wrists were also above 10%. The top ten high-risk major industries for musculoskeletal disorders of various body parts for each gender were identified, and some industries, including “Basic Metal Industries” and “Buildings Construction,” were among the top ten for multiple body parts. Our study showed that MSDs of body parts other than the back are also prevalent, especially in the neck, shoulders, hands and wrists. We also identified high-risk industries for further research and intervention to estimate the prevalence of workplace noise exposure and use of hearing protection devices (HPDs) at noisy work.. **(V.Yerpude 2010)**

An observational study was conducted to evaluate the prevalence of workplace noise exposure. The total of 9,275 currently employed workers aged ≥16 years was included in the weighted analysis. Hazardous workplace noise exposure was defined as self-reported exposure to noise at their current job that was so loud that the respondent had to speak in a raised voice to be heard. Industry and occupation were determined based on the respondent's current place and type of work. Results showed that Twenty-two million US workers (17%) reported exposure to hazardous workplace noise. The weighted prevalence of workplace noise exposure was highest for mining (76%, SE = 7.0) followed by lumber/wood product manufacturing (55%, SE = 2.5). High-risk occupations included repair and maintenance, motor vehicle operators, and construction trades. Overall, 34% of the estimated 22 million US workers reporting hazardous workplace exposure reported non-use of HPDs. The

proportion of noise-exposed workers who reported non-use of HPDs was highest for healthcare and social services (73.7%, SE = 8.1), followed by educational services (55.5%) at P<0.05. **(Geoffrey M, 2009)**

A cross sectional study was conducted to estimate the prevalence of work related asthma and work related wheezing in United States workers. To identify high risk industries that could be targeted for future intervention. To determine the population attributable risk of work related asthma and work related wheezing. Methods used for this study was the third national health and nutrition examination survey, 1988–1994 (NHANES III) was analyzed to determine the prevalence of work related asthma and wheezing and to identify initially defined industries at risk among United States workers aged 20 and older. Separate logistic models were developed with work related asthma and work related wheezing as outcomes. Work related asthma was defined as affirmative response to questions on self reported physician diagnosed asthma and work related symptoms of rhinitis, conjunctivitis, and asthma. Work related wheezing was defined as affirmative response to questions on self reported wheezing or whistling in the chest in the previous 12 months and work related symptoms of rhinitis, conjunctivitis, and asthma. All analyses were adjusted for age, sex, smoking, and atopic. Results showed that prevalence of work related asthma was 3.70% (95% confidence interval (95% CI) 2.88 to 4.52) and the prevalence of work related wheezing was 11.46% (95% CI 9.87 to 13.05). at P<0.01. The main industries identified at risk of work related asthma and wheeze included the entertainment industry; agriculture, forestry, and fishing; construction; electrical machinery; repair services; and lodging places. The population attributable risk for work related asthma was 36.5% and work related wheezing was 28.5%. The findings provide impetus for further research and actions by public health professionals which

prioritise occupational asthma on the public health agenda. Future intervention strategies need to be developed for effective control and prevention of asthma in the workplace. **(SR Tortolero, 2002)**

A case cohort study was conducted to evaluate the associations between occupational exposures in the textile industry and the risks of oesophageal cancer and stomach cancer among female textile workers in Shanghai China. One hundred and two workers with incident oesophageal cancer and 646 workers with incident stomach cancer diagnosed between 1989 and 1998 were compared with an age-stratified reference sub cohort (n = 3,188). Work histories were ascertained for all study subjects from factory personnel records or interviews. Exposures were reconstructed for chemicals and dusts by linking work history data with a job-exposure matrix developed for the Shanghai textile industry. Hazard ratios and 95 percent confidence intervals were calculated with Cox proportional hazards modelling adapted for the case-cohort design. Risk of oesophageal cancer was associated with long-term (≥10 years) exposure to silica dust (hazard ratio = 15.8, 95% confidence interval: 3.5, 70.6) and metals (hazard ratio = 3.7, 95% confidence interval: 1.9, 7.1). Cumulative exposure to end toxin, a contaminant of cotton dust, was inversely related to risks of both oesophageal cancer (p-trend = 0.01) and stomach cancer (p-trend < 0.001) when exposures were lagged 20 years. Endoxin has not been previously reported to be a protective factor for either stomach cancer or oesophageal cancer and therefore warrants further study. **(Karen J Wernlim, 2005)**

A cross- sectional study was conducted to determine chronic effects of long term exposure to cotton dust and end toxin on incidence of respiratory symptoms and the effect of cessation of exposure. Respiratory health in 429 Chinese cotton textile workers (study group) and 449 silk textile workers (control group) was followed

prospectively from 1981 to 1996. Byssinosis, chest tightness, and non-specific respiratory symptoms were assessed by means of identical standardised questionnaires at four time points. Exposures to cotton dust and end toxin were estimated using area samples collected at each survey. Incidence and persistence of symptoms were examined in relation to cumulative exposure and exposure cessation using generalised estimating equations (GEE). The results showed that among cotton workers, the cumulative incidence of byssinosis and chest tightness was 24% and 23%, respectively, and was significantly more common in smokers than in non-smokers. A high proportion of symptoms were found to be intermittent, rather than persistent. Among silk workers, no typical byssinosis was identified; the incidence of chest tightness was 10%. Chronic bronchitis, cough, and dyspnoea were more common and persistent in the cotton group than in the silk group. Significantly lower odds ratios for symptoms were observed in cotton workers who left the cotton mills; risk was also related to years since last worked. Multivariate analysis indicated a trend for higher cumulative exposure to endotoxin in relation to a higher risk for byssinosis. Researcher Conclude that chronic exposure to cotton dust is related to both work specific and non-specific respiratory symptoms. Byssinosis is more strongly associated with exposure to end toxin than to dust. Cessation of exposure may improve the respiratory health of cotton textile workers; the improvement appears to increase with time since last exposure. **(X.R. Wang, 2003)**

This quasi experimental field study explored the effect of noise attenuation on urinary cortical excretion (sampled three times, at 6:30 and 10:30 AM and 1:30 PM) and reported fatigue and post work irritability among 35 healthy industrial workers chronically exposed to high ambient noise levels (>85 dB [A]) without using ear protectors. The results indicated that under conditions of chronic noise exposure the

cortical level at the end of the work shift was high and almost reached the morning level. This elevation in cortical excretion was accompanied by high levels of accumulated fatigue and post work irritability. Attenuating the noise reaching the eardrum by 30 to 33 dB, by fitting the same workers with earmuffs for a period of 7 working days, resulted in a significant improvement in both psychological and physiological stress reactions. Besides decreasing noise intensity, no other changes were made, either to ongoing work activities or to the other characteristics of the ambient noise. The cortical level declined steadily during the work shift and exhibited the normal cortical diurnal rhythm. At the end of the work shift, this level was significantly lower ($P < .05$) than that observed under the chronic noise-exposure condition. There was also a reduction in reported fatigue ($P < .05$) and post work irritability ($P < .01$). These findings demonstrate the "net" contribution of ambient noise to elevating stress reactions to regular work demands. **(Melamed, 2006)**

An analytical study was conducted to assess the effects of mask fitness and worker education on the prevention of occupational dust exposure. We examined dust protective mask performance and its relation to pulmonary function as well as the effects of worker education on the proper wearing of masks. One hundred and seventy- eight workers from 15 factories subject to dust exposure participated in this study. All participants were interviewed to obtain relevant personal information and underwent both a mask leakage and a pulmonary function test. The mask leakage was expressed as a percentage, with under 10% leakage indicating that the dust protective mask worked efficiently. In addition, 23 workers from 2 factories were educated on how to wear masks properly. The average mask leakage was 24.3%and 58% of workers were ineffective masks. Through pulmonary function was almost normal, the percent vital capacity (%VC) tended to be lower depending on the mask leakage.

Mask education, which was very easy and took only a short time, dramatically decreased average mask leakage from 32.1%to 10.5% (P< 0.001). Educating workers to wear masks properly might prevent the worsening of pulmonary function in response to dust exposure. Appropriate mask fitness by education could be useful in preventing the development of byssinosis. **(Shinji Kojima, 2008)**

Summary:

This chapter dealt with literature related to occupational hazards, respiratory problems in cotton mill and prevention of occupational hazards.

CHAPTER-III

METHODOLOGY

Research methodology is the logic structure and strategy of study. It contains clear description of samples studied, adequate information pertaining to reliability and validity, sufficient description on collection of data, appropriateness of statistical treatment and data processing procedures.

This chapter describes methodology adopted to assess the effectiveness of video assisted teaching programme on knowledge regarding occupational hazards and its prevention among cotton mill workers at selected Industries, Salem.

Research Approach:

Quantitative evaluative research approach was adopted for the study.

Research Design:

The research design adopted for this study was quasi experimental (pre test and post test with control group) design which was used to measure the effectiveness of video assisted teaching programme on occupational hazards and its prevention.

E = O_1	X	O_2
C = O_1		O_2

E = Experimental group

C = Control group

O_1= Pre test knowledge on occupational hazards and its prevention.

X = providing video assisted teaching programme to cotton mill workers in experimental group.

O_2= Post test knowledge on occupational hazards and its prevention.

s

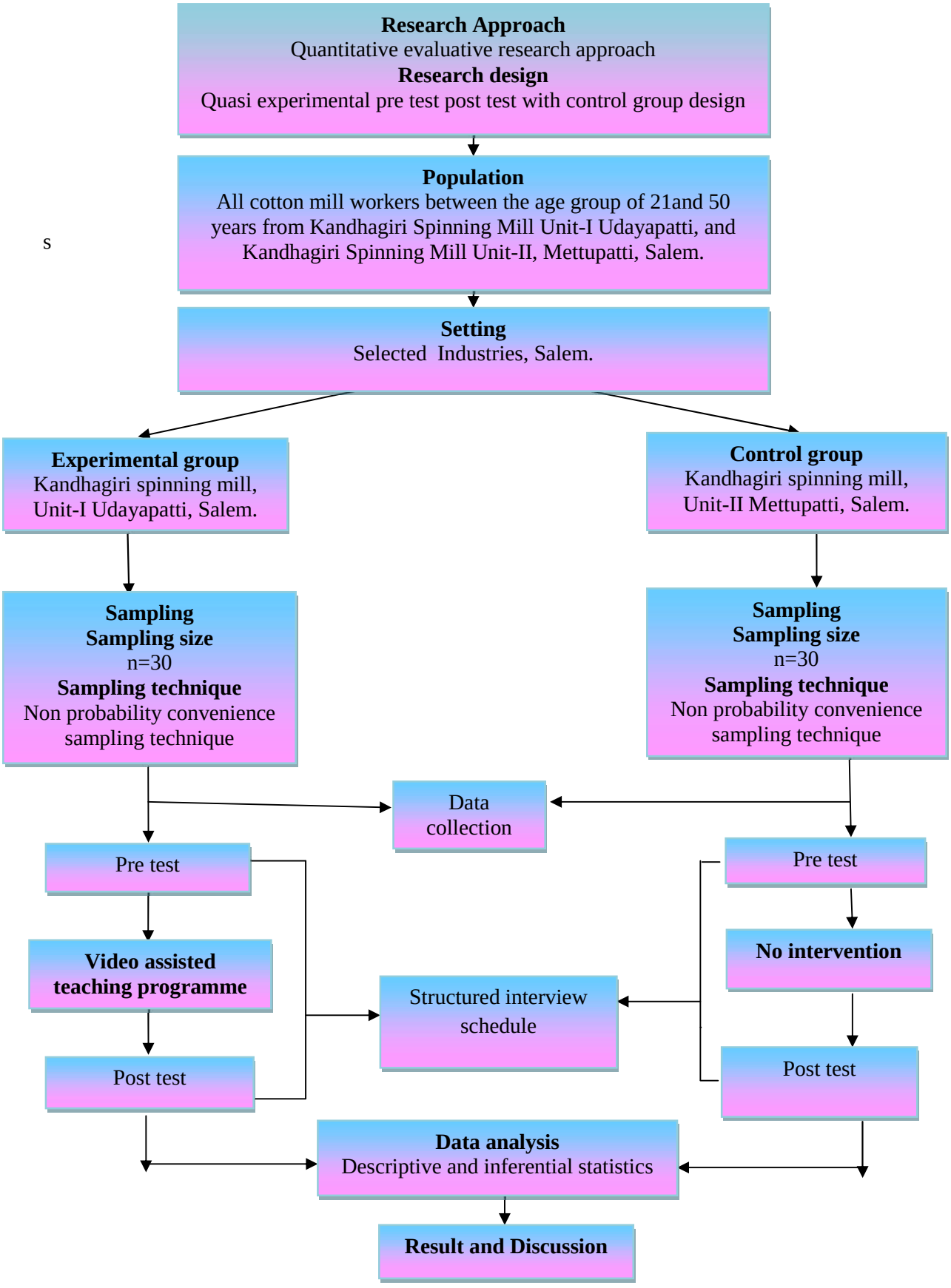

Figure-3.1. Schematic Representation of Research Methodology

Population:

Population is the set of people or entities to which the results of a research are to be generalised. (**Denise F. Polit and Beck, 2011**)

The population of the study comprises of all cotton mill workers with age group between 21 and 50 years at selected Industries, Salem.

Description of the Setting:

The physical location and conditions in which data collection takes place in a study. **(Denise F.Polit and Beck, 2011)**

The study was conducted at selected Industries, Salem. The samples for experimental group were selected from Kandhagiri Spinning Mill Unit-I, Udayapatti, Salem and the samples for control group were selected from Unit-II, Mettupatti, Salem which was 20 kms and 22kms away respectively from Sri Gokulam College of Nursing, Salem. The settings were selected by using non probability convenience sampling technique and based on the availability of samples and feasibility in terms of co-operation.

Sampling:

Sampling is the process of selecting a representative segment of the population under study. **(Denise F. Polit and Beck, 2011)**

Sample:

The samples in the study comprises of cotton mill workers with age group between 21 and 50 years from Kandhagiri spinning mill Unit-I Udayapatti and Kandhagiri Spinning Mill Unit- II, Mettupatti Salem, and who fulfilled the inclusion criteria.

Sample size:

Sample size consists of 60 cotton mill workers among 30 were in experimental group and 30 were in control group.

Sampling technique:

Non probability convenience sampling technique was adopted for selecting the samples for the study.

Criteria for sample selection:

- Inclusion criteria
  - ✓ Cotton mill workers in the age group between 21 and 50 years.
  - ✓ Both male and female
  - ✓ Who were willing to participate in the study.
  - ✓ Who were able to understand Tamil.
- Exclusion criteria:
  - ✓ Cotton mill workers who were sick or on leave during data collection.
  - ✓ Workers who were already exposed to Video assisted Teaching programme.

Variables:

Independent variable: Video assisted teaching programme

Dependent variable: Knowledge regarding occupational hazards and its prevention.

Description of the Tool:

With the investigator's personnel and professional experiences and after extensive literature review and discussion with experts the tool was developed for data collection.

The tool consists of the following sections.

Section-A:

This section consists of demographic variables such as age, sex, educational status, and area of work, work exposure, family monthly income, and previous information.

Section-B: Structured Interview schedule on occupational hazards and its prevention:

It consisted of 32 multiple choice items to assess the knowledge on occupational hazards and its prevention among cotton mill workers. The structured interview schedule had 4 alternative responses, the correct response was given a score of one and incorrect was scored as zero.

Table- 3.1: Scoring procedure for knowledge

Knowledge	Score	Percentage
Inadequate knowledge	0-11	0-34%
Moderately adequate knowledge	12-22	35-69%
Adequate knowledge	23-32	70-100%

Validity and Reliability:

Validity:

Validity refers to the degree to which an instrument measures what it is supposed to measure. (**Polit and Hungler, 2011)**

Validity of the tool was obtained on the basis of opinion of subject experts (Two medical experts, Five Community Nursing Specialist), Minor modifications were made as suggested by experts and the final tool was prepared. The tool was translated in Tamil with the help of language expert.

Reliability:

Reliability is the degree of consistency or dependability with which an instrument measures an attribute. (**Denise F.Polit and Beck, 2011**)

Reliability of the tool was established by Test-re test method. The investigator selected 10 cotton mill workers from V.J.Yarns Kalarmpatty on 14.7.2013 and administered the structured interview schedule regarding occupational hazards and its prevention .Retest was conducted on 19.7.13. The reliability value was r=0.96 which indicates that the tool was reliable. Hence the tool was considered for proceeding.

Pilot Study:

The pilot study was conducted from 22.7.2013 to 27.7.2013 after the tool presentation and approval by the College of nursing faculty and dissertation committee. Validity and Reliability of the tool was tested during this time. After getting formal permission from the Managing directors of the Industry and verbal consent from the samples, the investigator selected 10 cotton mill workers from Sri Sakunthala Devi Mill, Kothampadi as experimental group and 10 cotton mill workers from V.J.Yarns Mill, Kalarampatty as control group through non probability convenience sampling technique. Then the data was collected by using structured interview schedule.

A pre-test was done for both experimental and control group on 22.07.2013. Video assisted teaching programme was given only to the experimental group on the same day after pre test.

A post test was done for both experimental and control group on 27.07.2013. The tool was administered and checked for its feasibility, language and appropriateness. The samples were chosen similar in characteristics to those of

population under study. The tool was reliable and study was found feasible, practicable and helped for further proceedings.

Method of Data collection:

Ethical Consideration:

Written permission was obtained from the Managing Director of Kandhagiri Spinning Mill, Salem. Informed verbal consent was obtained from cotton mill workers who met the inclusion criteria.

Period of Data Collection:

Data was collected over a period of 4 weeks from 29.07.2013 to 28.08.2013.

Data collection Procedure:

The investigator selected 30 samples from Kandhagiri Spinning Mill Unit-I Udayapatti and 30 samples from Kandhagiri Spinning Mill Unit-II Mettupatti as experimental and control group respectively through non probability convenience sampling technique. The selected samples were explained about the purpose of study, Good rapport was developed with samples to get high level of co-operation. Samples in the experimental group were subdivided into 3 groups (10 in each group) and pre test was done on12.08.2013, 13.08.2013, 14.08.2013 by using structured interview schedule. After the pre test video assisted teaching programme was given regarding "definitions of occupational health and hazards, occupational hazards like Byssinosis, Pneumonitis, Empysema and Prevention". Post test was done on 7^{th} day 19.08.2013 20.08.2013, 21.08.2013, after the intervention by using the same tool.

Samples in the control group were subdivided in to 3 groups and pre test was done on 15.08.2013, 16.08.2013, 17.08.2013. No intervention was given and the workers had only regular work activities. Post test was done on 7th day 22.08.2013, 23.08.2013, 24.08.2013 by using the same tool.

Plan for Data Analysis:

The collected data will be arranged and tabulated. Descriptive statistics like frequency, percentage, mean standard deviation and mean difference will be used. Inferential statistics like paired‘t’ test and independent‘t’ test will be used to find the effectiveness of Video assisted Teaching programme on knowledge regarding occupational hazards and its prevention among cotton mill workers and chi-square test will be used to associate the pre test scores on knowledge regarding occupational hazards and its prevention among cotton mill workers with their selected demographic variables.

Summary:

This chapter consists of research approach, research design, population, description of the setting, sampling, variables, and description of the tool, validity, reliability, and pilot study, method of data collection and plan for data analysis.

CHAPTER-IV

DATA ANALYSIS AND INTERPRETATION

Research data must be processed and analysed in an orderly fashion so that patterns and relationship can be discerned validated and hypotheses can be tested. Quantitative data analyzed through statistical analysis includes simple procedures as well as complex and sophisticated methods. **(Polit, 2004)**

The chapter deals with analysis and interpretation of data collected from cotton mill workers at selected industries, Salem. The collected data are tabulated, analysed, and preserved in tables, figures and interpreted under the following sections based on objectives and hypotheses of the study.

Presentation of the Data:

This chapter is divided into four sections,

Section –A:

Distribution of samples according to their selected demographic variables in experimental group and control group.

Section –B:

Distribution of samples according to their pre test scores on knowledge regarding occupational hazards and its prevention in experimental group and control group.

Section-C:

a) Distribution of samples according to their post test scores on knowledge regarding occupational hazards and its prevention in experimental group and control group.

b) Comparison between the pre test and post test scores on knowledge regarding occupational hazards and its prevention among samples in experimental group and control group.

c) Area wise comparison between the pre test and post test scores on knowledge regarding occupational hazards and its prevention among samples in experimental group.

d) Area wise comparison between the pre test and post test scores on knowledge regarding occupational hazards and its prevention among samples in control group.

e) Mean standard deviation, mean percentage and difference in mean percentage according to their pre test and post test scores on knowledge regarding occupational hazards and its prevention among samples in experimental group and control group.

Section-D:

a) Effectiveness of video assisted teaching programme on occupational hazards and its prevention.

b) Association between the pre test scores on knowledge regarding occupational hazards and its prevention among samples and their selected demographic variables in experimental group and control group.

Section –A

Distribution of samples according to their selected demographic variables in experimental group and control group.

Table-4.1:

Frequency and percentage distribution of samples according to their demographic variables.

n =60

S.No	Demographic variables	Experimental group (n=30)		Control group (n=30)	
		f	%	f	%
1.	Age				
	a) 21 – 30 yrs	4	13.33	10	33.33
	b) 31 – 40 yrs	12	40	19	63.34
	c) 41 – 50 yrs	14	46.67	1	3.33
2.	Sex				
	a) Male	11	36.67	16	53.33
	b) Female	19	63.33	14	46.67
3.	Education				
	a) No formal education	14	46.67	12	40
	b) Primary education	15	50	14	46.67
	c) Secondary education	1	3.33	4	13.33
4.	Area of work				
	a) Mixing dept.	15	50	7	23.33
	b) Comber dept.	3	10	3	10
	c) Drawing dept.	1	3.33	2	6.67
	d) Simplex dept.	4	13.33	5	16.67
	e) Spinning dept.	7	23.34	13	43.33
5.	Period of work exposure				
	a) > 5 years	17	56.67	14	46.67
	b) 5 – 10 years	12	40	11	36.67
	c) More than 10 years	1	3.33	5	16.66
6.	Family monthly income				
	a) < Rs.5000	20	66.67	12	40
	b) Rs.5000 – 10000	10	33.33	17	56.67
	c) > Rs.10000	-	-	1	3.33
7.	Had Previous information				
	a) Yes	-	-	-	-
	b) No	30	100	30	100

Table-4.1 shows that, in experimental group 4(13.33%) samples are in the age group of 21-30 years, 12(40%) are in the age group of 31 – 40 years, 14(46.67%) are in the age group of 41 – 50 years, 11(36.67%) are males and 19(63.33%) are females, 14(46.67%) have no formal education, 15(50%) have primary education, 1(3.33%) has secondary education. 15(50%) are working in mixing department, 3(10%) are working in comber department, 1(3.33%) is working in drawing department, 4(13.33%) are working in simplex department, 7(23.34%) are working in spinning department, 17(56.67%) are exposed to less than 5 years, 12(40%) are exposed to 5 -10 years. 1(3.33%) is exposed to more than 10 years. 20(66.67%) are earning less than Rs.5000, 10(38.33%) are earning of Rs.5000 – 10000,all 30(100%) of them have no previous information regarding occupational hazards and its prevention.

In control group 10(33.33%) samples are in the age group of 21-30 years, 19(63.34%) are in the age group of 31-40 years, 1(3.33%) is in the age group of 31-40 years, 16(53.33%) are males and 14(46.67%) are females. 12(40%) have no formal education, 14(46.67%) have primary education, 4(13.33%) have secondary education, 7(23.33%) are working in mixing department, 3(10%) are working in comber department, 2(6.67%) are working in drawing department, 5(16.67%) are working in simplex department, 13(43.33%) are working in spinning department, 14(46.67%) are exposed to less than 5 years, 11(36.67%) are exposed to more than 10 years, and 5(16.66%) are exposed more than 10 years, 12(40%) are earning less than Rs.5000, 17(56.67%) are earning Rs.5000 – 10000, 1(3.33%) is earning above Rs.10000,all 30(100%) of them have no previous information regarding occupational hazards and its prevention.(Table-4.1)

Section –B

Distribution of samples according to their pre test scores on knowledge regarding occupational hazards and its prevention in experimental group and control group.

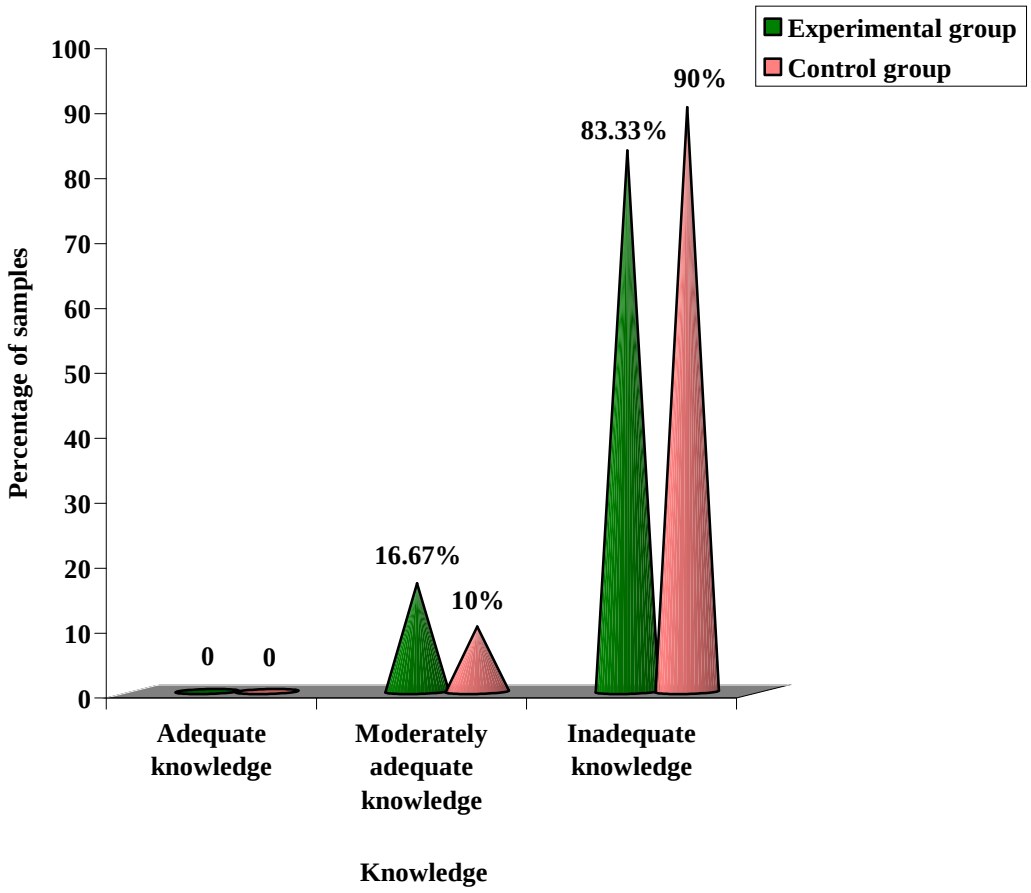

Figure-4.1: Percentage distribution of samples according to their pre test scores on knowledge regarding occupational hazards and its prevention.

The above figure-4.1 shows that, during pre test in experimental group, none of the samples have adequate knowledge, 5(16.67%) have moderately adequate knowledge and majority of them 25 (83.33%) have inadequate knowledge. In control group, none of the samples have adequate knowledge, 3(10%) have moderately adequate knowledge and majority of them 27 (90%) have inadequate knowledge regarding occupational hazards and its prevention.

Section – C

a) Distribution of samples according to their post test scores on knowledge regarding occupational hazards and its prevention in experimental group and control group.

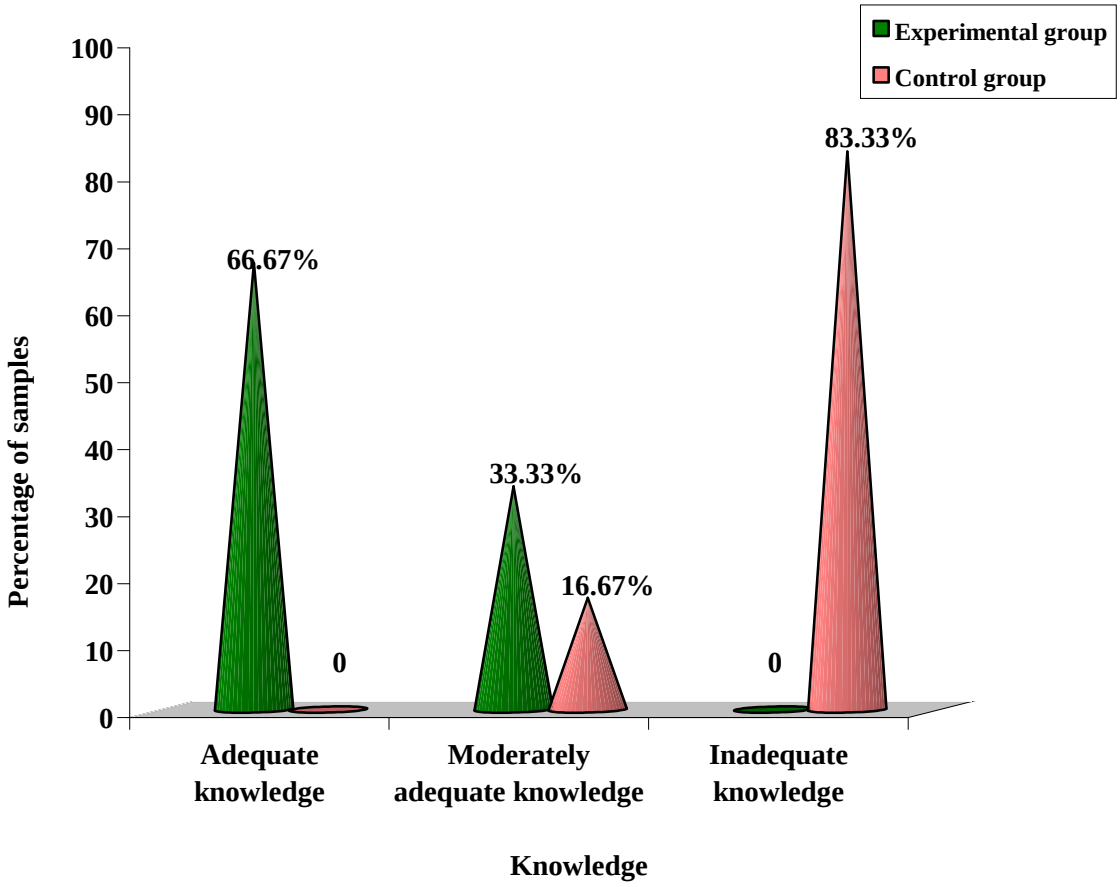

Figure-4.2: Percentage distribution of samples according to their post test scores on knowledge regarding occupational hazards and its prevention.

The above figure-4.2 shows that, during post test, in experimental group, highest percentage of the samples 20(66.67%) have adequate knowledge, 10(33.33%) have moderately adequate knowledge and none of them have inadequate knowledge. In control group none of the samples have adequate knowledge, 5(16.67%) have moderately adequate knowledge and majority of them 25(83.33%) have inadequate knowledge regarding occupational hazards and its prevention.

b) Comparison between the pre test and post test scores on knowledge regarding occupational hazards and its prevention among samples in experimental group and control group.

Table-4.2:

Frequency and percentage distribution according to their pre test and post test scores on knowledge regarding occupational hazards and its prevention.

n = 60

S.No	Knowledge	Experimental group (n = 30)				Control group (n = 30)			
		Pre test		Post test		Pre test		Post test	
		f	%	f	%	f	%	f	%
1.	Adequate knowledge	-	-	20	66.67	-	-	-	-
2.	Moderately adequate knowledge	5	16.67	10	33.33	3	10	5	16.67
3.	Inadequate knowledge	25	83.33	-	-	27	90	25	83.33

The above table shows that, in experimental group none of the samples have adequate knowledge, 5(16.67%) have moderately adequate knowledge and majority of them 25(83.33%) have inadequate knowledge during pre test. In post test highest percentage of them 20(66.67%) have adequate knowledge, 10(33.33%) have moderately adequate knowledge and none of them have inadequate knowledge regarding occupational hazards and its prevention.

In control group, none of the samples have adequate knowledge, 3(10%) have moderately adequate knowledge and majority of them 27(90%) have inadequate knowledge during pre test. In post test, none of them have adequate knowledge, 5(16.67%) have moderately adequate knowledge and majority of them 25(83.33%) have inadequate knowledge regarding occupational hazards and its prevention .

Table: 4.3:

c) Area wise comparison between the pre test and post test scores on knowledge regarding occupational hazards and its prevention among samples in experimental group.

n=60

Area wise knowledge	Max. Score	Pre test			Post test			Difference in mean %
		Mean	SD	Mean %	Mean	SD	Mean %	
General aspects	7	2.03	0.69	29	5 .6	1.22	80	51
Causes	3	1.3	0.81	43.3	1.96	0.84	65.3	21.9
Sign & symptoms	3	0.9	0.59	30	2.2	0.74	73.3	43.3
Diagnosis	2	0.5	0.32	25	0.63	0.61	31.5	.6.5
Treatment and Complication	3	0.56	0.46	18.7	1.6	0.8	53.3	34.5
Prevention	14	4.4	0.86	31.4	10.2	3.05	72.8	41.4
Overall	32	9.69	4.04	32.3	22.06	6.97	73.53	41.3

The above table shows that, in general aspects pre test mean score is 2.03±0.69 which is 29%, post test mean score is 5.6± 1.22 which is 80% with a difference of 51%.

In causes pre test mean score is 1.3±0.81 which is 43.3%, post test mean score is 1.96±0.84 which is 65.3% with a difference of 21.9%.

In sign and symptoms pre test mean score is 0.9±0.59 which is 30%, post test mean score is 2.2±0.74 which is 73.3% with a difference of 43.3%.

In diagnosis pre test mean score is 0.5±0.32 which is 25%, post test mean score is 0.63±0.61 which is 31.5% with a difference of 6.5%.

In treatment and complication pre test mean score is 0.56±0.46 which is 18.7%, post test mean score is 1.6±0.8 which is 53.3% with a difference of 34.5%.

In prevention pre test mean score is 4.4±0.86 which is 31.4%, post test mean score is 10.2±3.05 which is 72.8% with a difference of 41.4%.

In overall pre test mean score is 9.69±4.04 which is 32.3%, post test mean score is 22.06±6.97 which is 73.53% with a difference of 41.3%.

Table: 4.4:

d) Area wise comparison between the pre test and post test scores on knowledge regarding occupational hazards and its prevention among samples in control group.

n=60

Area wise knowledge	Max. score	Pre test			Post test			Difference in mean%
		Mean	SD	Mean %	Mean	SD	Mean %	
General aspects	7	2.26	1.04	32.3	2.36	0.65	33.7	1.43
Causes	3	1.03	0.71	34.3	0.86	0.60	28.6	5.73
Sign & symptoms	3	1.2	0.91	40	1.16	0.53	38.6	1.3
Diagnosis	2	0.1	0.3	5	0.1	0.3	5	-
Treatment and Complication	3	0.93	0.57	31	0.93	0.57	31	-
Prevention	14	3.6	1.22	25.7	4.26	1.50	30.4	4.72
Overall	32	9.12	4.77	30.4	9.67	4.15	32.23	1.83

The above table shows that, in general aspects pre test mean score is 2.26±1.04 which is 32.3%, post test mean score is 2.36± 0.65 which is 33.7% with a difference of 1.43%.

In causes pre test mean score is 1.03±0.71 which is 34.3%, post test mean score is 0.86±0.60 which is 28.6% with a difference of 5.73%.

In sign and symptoms pre test mean score is 1.2±0.91 which is 40%, post test mean score is 1.16±0.53 which is 38.6% with a difference of 1.3%.

In diagnosis pre test mean score is 0.1±0.3 which is 5%, post test mean score is 0.1±0.3 which is 5% with a difference of 0%.

In treatment and complication pre test mean score is 0.93±0.57 which is 31%, post test mean score is 1.93±0.57 which is 31% with a difference of 0%.

In prevention pre test mean score is 3.6±1.22 which is 25.7%, post test mean score is 4.26±1.50 which is 30.4% with a difference of 4.72%.

In overall pre test mean score is 9.12±4.77 which is 30.4%, post test mean score is 9.67±4.15 which is 32.23% with a difference of 1.83%

Table 4.5:

e) Mean standard deviation, mean percentage and difference in mean percentage according to their pre test and post test scores on knowledge regarding occupational hazards and its prevention among samples in experimental group and control group.

n = 60

S.No	Group	Pre test			Post test			Difference in mean %
		Mean	SD	Mean %	Mean	SD	Mean %	
1.	Experimental group	9.69	4.04	32.3	22.06	6.97	73.53	41.3
2.	Control group	9.12	4.77	30.4	9.67	4.15	32.23	1.83

Above table shows that, the pre test mean score is 9.69±4.04 which is 32.3% and post test mean score is 22.06 ±6.97 which is 73.53% with the difference of 41.3% in experimental group. The pre test mean score is 9.12±4.77 which is 30.4% and post test mean score is 9.67±4.15 which is 32.23% with the difference of 1.83% in control group.

Difference in mean value in experimental group is higher than the control group. This reveals that video assisted teaching programme has increased the knowledge regarding occupational hazards and its prevention among cotton mill workers in experimental group.

Section-D

a) Effectiveness of video assisted teaching programme on occupational hazards and its prevention.

Table-4.6:

i. Mean, SD, and paired 't' value on knowledge regarding occupational hazards and its prevention among samples in experimental group.

n= 30

S.No	Experimental Group	Mean	SD	Mean difference	df	't' value	Table value
1.	Pre test	9.69	4.04	12.37	29	5.30*	2.75
2.	Post test	22.06	6.97				

*** Significant at p ≤ 0.05 level.**

Above table shows that in experimental group the pre test mean score is 9.69±4.04 and the post test mean score is 22.06± 6.97with a mean difference of 12.37 The estimated paired-'t' value 5.30 is significantly higher than the table value 2.75 at p≤ 0.05evel. It shows that video assisted teaching programme was effective in gaining adequate knowledge regarding occupational hazards and its prevention among cotton mill workers in experimental group. Hence the research hypothesis H_1 is retained at p≤0.05 level.

Table-4.7:

ii. Mean, SD and Independent 't' value on knowledge regarding occupational hazards and its prevention among samples in experimental and control group.

n = 60

S.No	Group	Post test		df	't' value	Table value
		Mean	SD			
1.	Experimental group	22.06	6.97	58	13.36*	2.75
2.	Control group	9.67	4.15			

*** significant at P<0.05 level**

The above table shows that in experimental group, the post test mean score on knowledge regarding occupational hazards and its prevention is 22.06±6.97 and in control group post test mean score is 9.67±4.15, Hence the't' value is 13.36 which shows that video assisted teaching programme is effective in gaining adequate knowledge regarding occupational hazards and its prevention among cotton mill workers in experimental group. Therefore hypothesis H_2 is retained at P≤0.05 level

b) Association between the pre test scores on knowledge regarding occupational hazards and its prevention among samples and their selected demographic variables in experimental group and control group.

Table-4.8:

Chi-square test on the pre test scores on knowledge regarding occupational hazards and its prevention among samples and their selected demographic variables.

n=60

S.No	Demographic variables	Experimental group (n=30)			Control group (n=30)		
		df	$¡^2$	Table value	df	$¡^2$	Table value
1.	Age	2	1.31	4.30	2	4.16	4.30
2.	Sex	1	0.61	12.71	1	0.91	12.71
3.	Education	2	0.90	4.30	2	0.96	4.30
4.	Area of work	4	0.75	2.78	4	1.32	2.78
5.	Period of work exposure	2	0.67	4.30	4	1.26	2.78
6.	Family monthly income	1	-	12.71	2	2.97	4.30

*** significant at P<0.05 level**

The above table reveals that, there is no significant association found between the pre test scores on knowledge regarding occupational hazards and its prevention among cotton mill workers and their selected demographic variables in experimental group and control group. Hence hypothesis H_3 is rejected at P≥0.05 level.

Summary:

This chapter deals with data analysis and interpretation in the form of statistical values based on objectives. Frequency and percentage are used to distribute the samples according to their demographic variables and classify them according to the scores on knowledge regarding occupational hazards and its prevention among cotton mill workers. The paired‘t’ test and independent ‘t’ test are used to assess the effectiveness of video assisted teaching programme on knowledge regarding occupational hazards and its prevention among cotton mill workers. The chi-square analysis is used to associate pre test scores on knowledge regarding occupational hazards and its prevention among cotton mill workers with their selected demographic variables in experimental group and control group.

CHAPTER-V

DISCUSSION

This chapter discusses the findings of study derived from descriptive and inferential statistics. This study was conducted to assess the effectiveness of video assisted teaching programme on knowledge regarding occupational hazards and its prevention among cotton mill workers at selected industries, Salem.

Description of the demographic variables

The demographic variables were collected through structured interview schedule. The knowledge on occupational hazards and its prevention among cotton mill workers was assessed before and after video assisted teaching programme.

- The investigator found that, in experimental group14 (46.67%).were in the age group of 41-50 years and in control group 19(63.3%) were in the age group of 31-40 years.
- In experimental group 19(63.3%) were females and in control group 16(53.3%) were males.
- In experimental group 15 (50%) had primary education and in control group 14(46.67%) had primary education.
- In experimental group 15(50%) were working in mixing department and in control group 13(43.33%) were working in spinning department.
- In experimental group 17(56.67%) were exposed to less than 5 years and in control group14 (46.67%) were exposed to less than 5 years.
- In experimental group 20(66.67%) were earning less than Rs.5000 and in control group17 (56.67%) were earning Rs. 5000-10,000.
- In experimental group and control group 30(100%) did not have previous information on occupational hazards and its prevention.

First objective of the study was to assess the knowledge regarding occupational hazards and its prevention among cotton mill workers in experimental group and control group.

In experimental group 5 (16.67%) samples had moderately adequate knowledge and 25(83.3%) had inadequate knowledge during pre test. In post test highest percentage of them 20 (66.67%) had adequate knowledge 10(33.33%) had moderately adequate knowledge regarding occupational hazards and its prevention.

In control group 3(10%) had moderately adequate knowledge and majority of them 27 (90%) had inadequate knowledge during pre test. In post test, 5(16.67%) had moderately adequate knowledge and majority of them 25(83.33%) had inadequate knowledge regarding occupational hazards.

The Present study findings were supported by a study conducted by **Khan Hallem, (2009)** A study to assess the effectiveness of structured teaching programme on knowledge regarding Byssinosis among cotton mill workers. The result found that higher percentage of samples 16(53.4%) had moderately adequate knowledge during pre test. During post test 21(70%) had adequate knowledge regarding byssinosis.

Second objective was to determine the effectiveness of video assisted teaching programme regarding occupational hazards and its prevention among cotton mill workers in experimental group.

The pre test mean score was 9.69± 4.04 and post test mean score was 22.06±6.97 with a mean difference of 12.37. The estimated paired 't' value 5.30 was significantly higher than the table value 2.75 at $p \leq 0.05$ level. It showed that video assisted teaching programme was effective in gaining adequate knowledge regarding occupational hazards and its prevention among cotton mill workers in experimental group. Hence the hypothesis H_1 was retained at $p \leq 0.05$ level.

In experimental group, post test mean score on knowledge regarding occupational hazards and its prevention was 22.06±6.97 and in control group post test mean score on knowledge regarding occupational hazards and its prevention was 9.67±4.15. Hence the 't' value is 13.36 which showed that video assisted teaching programme was effective in increasing the knowledge on occupational hazards and its prevention among cotton mill workers in experimental group. Therefore hypothesis H_2 is retained at $p \leq 0.05$ level.

Lalitha V.A, (2011) conducted an experimental study to assess the effectiveness of video assisted teaching programme on knowledge regarding occupational hazards and its prevention. The sample size was 60. In which 30 workers assigned to experimental group and 30 workers to control group.. A questionnaire was used to assess pre-post level of knowledge regarding occupational hazards and its prevention for the both group. Video assisted teaching programme was provided to experimental group. The findings showed that the majority of the respondents (80%) had adequate knowledge in experimental group which proved that video assisted teaching programme was effective in increasing the knowledge on occupational hazards and its prevention among cotton mill workers.

Third objective was to associate the pre-test scores on knowledge regarding occupational hazards and its prevention among cotton mill workers and their selected demographic variables in experimental group and control group.

There was no significant association between the pre-test scores on knowledge regarding occupational hazards and its prevention among cotton mill workers and their selected demographic variables in experimental group and control group. Hence, hypothesis H_3 was rejected at $p \geq 0.05$ level.

The present study findings were supported by **Monika, (2008)** conducted a study to assess the knowledge regarding occupational hazards and its prevention among cotton mill workers in Erode with a view to develop an information booklet regarding occupational hazards and its prevention. It showed that there was no association between the level of knowledge and demographic variables.

Summary:

The discussion was made in this chapter based on objectives of the study and its relation with similar studies conducted by other investigators. All the three objectives have been obtained. The first and second formulated hypotheses were retained and third hypothesis was rejected in this study.

CHAPTER-VI

SUMMARY, CONCLUSION, IMPLICATIONS AND RECOMMENDATIONS

This chapter consists of four sections. In the first two sections, summary and conclusion were presented. In the last two sections, implications for nursing practice and recommendations for further research were presented.

Summary:

The purpose of this study was to assess the effectiveness of video assisted teaching programme on knowledge regarding occupational hazards and its prevention among cotton mill workers at selected industries, Salem.

A total of 60 cotton mill workers who met the inclusive criteria were selected. The tool used in this study consisted of two sections, Section-A was demographic variables; Section-B was structured interview schedule on occupational hazards and its prevention.

The data were analysed using descriptive and inferential statistics. To test the hypotheses, paired, independent‘t’ test and chi-square were used. The 0.05 level of significance was used to test the hypotheses.

- In experimental group 5 (16.67%) samples had moderately adequate knowledge and 25(83.3%) had inadequate knowledge during pre test. In post test highest percentage of them 20 (66.67%) had adequate knowledge 10(33.33%) had moderately adequate knowledge regarding occupational hazards and its prevention.
- In control group 3(10%) had moderately adequate knowledge and majority of them 27 (90%) had inadequate knowledge during pre test. In post test, 5(16.67%) had moderately adequate knowledge and majority of them 25(83.33%) had inadequate knowledge regarding occupational hazards.

- The pre test mean score was 9.69±4.04 and post test mean score was 22.06±6.97 with a mean difference of 12.37.The estimated paired 't' test value was 5.30 which showed that video assisted teaching programme was effective in gaining adequate knowledge regarding occupational hazards and its prevention among cotton mill workers in experimental group. Hence the hypothesis H_1 was retained at $p \leq 0.05$ level.
- In experimental group, post test mean score was 22.06±6.97 and in control group post test mean score was 9.67±4.15, the't' value was 13.36 which showed that video assisted teaching programme was effective in gaining adequate knowledge regarding occupational hazards and its prevention among cotton mill workers in experimental group. Therefore hypothesis H_2 was retained at $p<0.05$ level.
- The present study showed that, there was no significant association in pre test scores on knowledge regarding occupational hazards and its prevention among cotton mill workers and their selected demographic variables in experimental group and control group. Hence, hypothesis H_3 was rejected at $p \geq 0.05$ level.

Conclusion:

This study was conducted to assess the effectiveness of video assisted teaching programme on knowledge regarding occupational hazards and its prevention among cotton mill workers at selected industries, Salem. The result of this study showed that video assisted teaching programme had significant effect in gaining adequate knowledge regarding occupational hazards and its prevention among cotton mill workers. Hence the administrators could arrange in service education on occupational hazards, diseases and its prevention by using various strategies in order to promote good health among the cotton mill workers

Implications:

The findings of this study have the following implications in various areas on nursing service, nursing education, nursing administration and nursing research.

Nursing Service:

- The community health nurse plays an important role in health care delivery system. Primary prevention is the essential component of community health nursing. The mode of primary prevention is health promotion which can be achieved through health education and training which brings about change in life style and behaviour.
- The community health nurse has the major role in preventive aspect, she should be able to explore the knowledge regarding occupational hazards and its prevention, so that action can be taken to prevent and reduce the occupational diseases and hazards.
- The community health nurse needs to organise health education programmes and occupational health awareness programme regarding occupational hazards and its prevention.

Nursing Education:

- The curriculum in India has little emphasis on occupational health. The nurse educator has the responsibility to update the knowledge among nursing personnel on occupational hazards and its prevention.
- The findings of study can serve as guidelines for the nurse educator for planning and conducting educational programmes for student nurses regarding occupational hazards and its prevention
- The nursing students should be made aware about their role in health promotion and disease prevention.

- The students should be motivated to make up innovation approaches to provide health education in different settings.

Nursing Administration:

- Nursing administration should check about relevant industrial policies aiming at preventive strategies. They should also influence legislation and regulation which will have an impact on the practice of occupational health.
- Organise in service education programme regarding occupational hazards and its prevention for nurses working in community and industrial setting.

Nursing Research:

- Nursing research can be done to find out the various innovative methods to improve the knowledge regarding occupational hazards and its prevention.
- Research can be conducted on various populations at various settings.

Recommendations:

- An extensive descriptive study can be conducted the health status of the industrial workers.
- A long term study can be conducted to find out the complications related to occupational hazards and its prevention.
- A comparative study may be conducted to find out the effectiveness of planned nursing intervention with control group.
- A study can be conducted with large sample size to generalize the results of the study.
- A comparative study can be done between urban and rural cotton mill workers on the level of knowledge regarding occupational hazards and its prevention.
- A similar study can be done to determine the effectiveness of video assisted teaching in different population for various hazards.

Summary:

This chapter dealt with summary, conclusion, nursing implications and recommendations.

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ANNEXURE –A

LETTER SEEKING PERMISSION TO CONDUCT A RESEARCH STUDY

From

Ms.Mary Asha. A,
Final year M.Sc.(N),
Sri Gokulam college of Nursing,
Salem.

To

The Principal,
Sri Gokulam college of Nursing,
Salem.

Respected Madam,

Sub: Permission to conduct Research Project–request- reg.

I, **Ms. MARY ASHA.A,** Final year M.Sc(N) student of Sri Gokulam college of Nursing is conducting research project in partial fulfillment of "The Tamilnadu Dr.M.G.R. Medical University, Chennai" as part of the requirement for the award of M.Sc(N). Degree.

Topic: "A Study to Evaluate the Effectiveness of Video Assisted Teaching Programme on Knowledge regarding Occupational Hazards and its Prevention among Cotton Mill Workers at Selected Industries, Salem"

I wish to seek permission to conduct the research study at Kandagiri spinning mill Unit-I,II, Salem.

Kindly do the needful.

Thanking you.

Date: Yours sincerely,

Place: Salem

(Ms. Mary Asha.A)

ANNEXURE-B

LETTER REQUESTING PERMISSION TO CONDUCT A RESEARCH PROJECT

SRI GOKULAM COLLEGE OF NURSING
3/836, Periyakalam, Neikkarapatti, Salem - 636 010.
Phone : 0427 - 6544550,2272240,2272250 Fax : 0427 - 2270200, 2447077
Email : sgcon2001@yahoo.com, sgcon2001@gmail.com

Date : .....

LETTER SEEKING PERMISSION TO CONDUCT A RESEARCH PROJECT

To,

The Managing Director,

Kandagiri Spinning Mills Ltd,

P.B.No.3, Udayapatti (Po),

Salem – 636 140.

Respected Sir / Madam,

Sub: Permission to Conduct Research Project- Reg.

This is to introduce Ms. Mary Asha. A final year M.Sc., (Nursing) student of Sri Gokulam College of Nursing. She is to conduct research project which is to be submitted to The Tamil Nadu Dr. M.G.R Medical University, Chennai in partial fulfilment of University requirement for the award of M.Sc., (Nursing) Degree.

TOPIC: "A Study to Assess the Effectiveness of Video Assisted Teaching Programme on knowledge regarding Occupational Hazards and its Prevention among Cotton Mill Workers at Selected Industries, Salem".

I request you to kindly permit her to conduct the research study in your industry from 29.07.13 to 28.08.13. She will adhere to the organizational policies and regulations.

Thanking you,

Yours sincerely,

Date: 11/7/2013

Place: Salem

Forwarded to CMO

Permitted

12/8/13

(Dr.K.Tamizharasi)
PRINCIPAL
Sri Gokulam College of Nursing
SALEM – 636 010.

SRI GOKULAM COLLEGE OF NURSING
3/836, Periyakalam, Neikkarapatti, Salem - 636 010.
Phone : 0427 - 6544550,2272240,2272250 Fax : 0427 - 2270200, 2447077
Email : sgcon2001@yahoo.com, sgcon2001@gmail.com

Date : .....

LETTER SEEKING PERMISSION TO CONDUCT A PILOT STUDY

To,

The Managing Director,

Sri Sakunthala devi Mill(P) Ltd.,

Kothampadi.

Salem – 636015..

Respected Sir / Madam,

Sub: Permission to Conduct a Pilot Study- Reg.

This is to introduce Ms. Mary Asha. A final year M.Sc., (Nursing) student of Sri Gokulam College of Nursing. She is to conduct research Study which is to be submitted to The Tamil Nadu Dr. M.G.R Medical University, Chennai in partial fulfilment of University requirement for the award of M.Sc., (Nursing) Degree.

TOPIC: "A Study to Assess the Effectiveness of Video Assisted Teaching Programme on knowledge regarding Occupational Hazards and its Prevention among Cotton Mill Workers at Selected Industries, Salem".

I request you to kindly permit her to conduct the Pilot study in your industry from 22.07.13 to 27.07.13. She will adhere to the organizational policies and regulations.

Thanking you,

Yours sincerely,

(Dr.K.Tamizharasi)
PRINCIPAL
Sri Gokulam College of Nursing
SALEM – 636 010.

Date: 11/07/2013

Place: Salem.

SRI LAKSHMI DEVI MILLS
Regd.Office: 34,Pillaiyar Koil Street,
Gugai, SALEM - 636 006.
Mill : 191/2, Kalarampatti Main Road,
Kalarampatti, SALEM - 636015.

SRI GOKULAM COLLEGE OF NURSING
3/836, Periyakalam, Neikkarapatti, Salem - 636 010.
Phone : 0427 - 6544550,2272240,2272250 Fax : 0427 - 2270200, 2447077
Email : sgcon2001@yahoo.com, sgcon2001@gmail.com

Date : .....

LETTER SEEKING PERMISSION TO CONDUCT A PILOT STUDY

To,

The Managing Director,

V.J Yarns Mill (P) Ltd.,

66, Nethaji Street, Kalarmpatty,

Salem- 636015.

Respected Sir / Madam,

Sub: Permission to Conduct a Pilot Study- Reg.

This is to introduce Ms. Mary Asha. A final year M.Sc., (Nursing) student of Sri Gokulam College of Nursing. She is to conduct research Study which is to be submitted to The Tamil Nadu Dr. M.G.R Medical University, Chennai in partial fulfilment of University requirement for the award of M.Sc., (Nursing) Degree.

TOPIC: "A Study to Assess the Effectiveness of Video Assisted Teaching Programme on knowledge regarding Occupational Hazards and its Prevention among Cotton Mill Workers at Selected Industries, Salem".

I request you to kindly permit her to conduct the Pilot study in your industry from 22.07.13 to 27.07.13. She will adhere to the organizational policies and regulations.

Thanking you,

Yours sincerely,

Date: 11/07/2013

Place: Salem.

For V.J. YARNS
PARTNER

(Dr. K. Tamizharasi)
PRINCIPAL
Sri Gokulam College of Nursing
SALEM – 636 010.

ANNEXURE - C

LETTER REQUESTING OPINION AND SUGGESTIONS OF EXPERTS FOR CONTENT VALIDITY OF THE RESEARCH TOOL

From

Ms.Mary Asha.A,
Final Year M.Sc., (N)
Sri Gokulam College of Nursing,
Salem, Tamil Nadu.

To,

(Through proper channel)

Respected Sir/ Madam,

Sub: Requesting opinion and suggestions of experts for establishing content validity of the tool-Reg.

I, **Ms.Mary Asha .A,** II Year M.Sc., (Nursing) student of Sri Gokulam College of Nursing, Salem, have selected the below mentioned Statement of the Problem for the research study to be submitted to The Tamil Nadu Dr. M.G.R. Medical University, Chennai as partial fulfillment for the award of Master of Science in Nursing.

Topic: "A Study to assess the Effectiveness of Video Assisted Teaching Programme on Knowledge regarding Occupational Hazards and its Prevention among Cotton mill Workers at Selected industries, Salem.

I request you to kindly validate the tool developed for the study and give your expert opinion and suggestion for necessary modifications.

Thanking you.

Yours sincerely,

Date:

Place : Salem (Mary Asha.A)

Enclosed:

1. Certificate of validation
2. Criteria checklist of evaluation of tool
3. Tool for collection of data
4. Content of occupational hazards and its prevention.

ANNEXURE-D

TOOL FOR DATA COLLECTION

SECTION A- DEMOGRAPHIC VARIABLES

INSTRUCTION:

The interviewer will ask questions listed below and place a tick mark [√] against the correct response given by respondent.

Sample No: _____ Date: _____

1. Age in years

a) 21 – 30 [ ]

b) 31 – 40 [ ]

c) 41 – 50 [ ]

2. Sex

a) Male [ ]

b) Female [ ]

3. Educational status

a) No formal education [ ]

b) Primary education [ ]

c) Secondary education [ ]

4. Area of work

a) Mixing department [ ]

b) Comber department [ ]

c) Drawing department [ ]

d) Simplex department [ ]

e) Spinning room [ ]

5. Period of work exposure

a) < 5 years [ ]

b) 5 – 10 years [ ]

c) More than 10 years [ ]

6 Family Monthly incomes

a) < 5000 [ ]

b) Rs.5001-10,000 [ ]

c) >10,000 [ ]

7. Had previous information?

a) Yes

b) No

SECTION-B

STRUCTURED INTERVIEW SCHDULE

INSTRUCTION:

The interviewer will ask questions listed below and place a tick mark [✓] against the correct response given by respondent.

I .General:

1. What is byssinosis?
   a) Inhalation of cotton dust [ ]
   b) Infection of the skin [ ]
   c) Inflammation of the lung [ ]
2. What is the other name for Byssinosis?
   a) Brown lung diseases [ ]
   b) Black lung diseases [ ]
   c) White lung diseases [ ]
3. What is pneumonitis?
   a) Inflammation of heart [ ]
   b) Inflammation of lung tissue [ ]
   c) Enlargement of liver [ ]
4. What is emphysema?
   a) Air collection in the stomach [ ]
   b) Obstruction of upper respiratory tract [ ]
   c) Air is abnormally present within the body tissues. [ ]
5. Which organ is mainly affected by the cotton dust?
   a) Heart [ ]
   b) Kidney [ ]
   c) Lungs [ ]

6. What is the incidence of occupational hazards among cotton mill workers?

    a) 200,000/ Year [ ]

    b) 100,000/ Year [ ]

    c) 50,000/Year [ ]

7. Which health problem is common among the cotton mill workers?

    a) Lung problem [ ]

    b) Skin problem [ ]

    c) Eye problem. [ ]

II. Causes

8. What is the most common cause for Byssinosis among cotton mill workers?

    a) Hereditary [ ]

    b) Direct contact with cotton dust [ ]

    c) Communicable [ ]

9. What is the common cause for pneumonitis among cotton mill workers?

    a) Pneumonia [ ]

    b) Adverse reaction to medications [ ]

    c) Sepsis [ ]

10. What is the cause for emphysema among cotton mill workers?

    a) Viral infection [ ]

    b) Long-term regular smoking [ ]

    c) Radiation therapy [ ]

III. Sign and symptoms:

11. What are the common signs of pneumonitis among cotton mill workers?

    a) Shortness of breath [ ]

    b) Fatigue [ ]

    c) Unintentional Weight loss [ ]

12. What are the common symptoms of Byssinosis?

a) Chest tightness, Cough, Wheezing , [ ]

b) Loss of appetite, Fatigue, Weight loss, [ ]

c) Nausea, vomiting, dizziness, [ ]

13. Which of the following sign will be observed by others in emphysema?

a) Dizziness and headache [ ]

b) Pain [ ]

c) Rash [ ]

IV. Diagnosis:

14. Which of the following laboratory test is used to diagnose byssinosis?

a) Ct scan [ ]

b) X-ray [ ]

c) Pulmonary function test [ ]

15. Which is the simplest laboratory test to diagnose pneumonitis?

a) Sputum test [ ]

b) Bronchoscopy [ ]

c) Surgical lung biopsy [ ]

IV. Treatment and Complication:

16. What is the best choice of treatment for byssinosis?

a) Transfer the worker to less contaminated area [ ]

b) Doing regular blood test [ ]

c) Taking regular medications under direct supervision [ ]

17. What is the drug of choice to reduce chest tightness?

a) Antihistamine and bronchodilators [ ]

b) Antibiotics [Gentamycin] [ ]

c) Antipyretics [Paracetamol] [ ]

18. Which is the most common complication of byssinosis?

a) Chronic bronchitis [ ]

b) Lung cancer [ ]

c) Tuberculosis [ ]

VI .Prevention:

19. What are the successful methods of controlling dust levels among cotton mill workers?

a) Using protective devices & Seeking medical advice [ ]

b) Using exhaust fan, improving ventilation and wetting procedure [ ]

c) Eliminating exposure to cotton dust & Stop working [ ]

20. What is the important preventive measure to prevent pneumonitis?

a) Eat fruits and vegetables, [ ]

b) Pneumonia vaccination and stop smoking [ ]

c) Avoid exposure to secondary smoke [ ]

21. Which of the following factor that can prevent emphysema?

a) Avoid smoking [ ]

b) Wash hands frequently [ ]

c) Getting absent regularly to work [ ]

22. How to prevent Malnutrition among cotton mill workers?

a) By taking balanced diet [ ]

b) By taking fluid diet [ ]

c) By taking solid diet [ ]

23. Which of the following is a measure of primary health promotionfor workers?

a) Health education [ ]

b) Family planning [ ]

c) Environmental sanitation [ ]

24. What is the best way to prevent noise pollution?

a) Using ear plug [ ]

b) Using mask [ ]

c) Growing trees near to the industry [ ]

25. What is the use of using face mask while working in industry?

a) To prevent injury to face [ ]

b) To prevent exposure to gases [ ]

c) To prevent inhalation of dust [ ]

26. What is the first aid measure for mechanical hazards?

a) Provision of medical care [ ]

b) Health education [ ]

c) Providing medications [ ]

27. Which of the following is the individual preventive measure that has to be followed by the workers?

a) Safe material handling [ ]

b) Personal protective devices [ ]

c) Building planning [ ]

28. How do you prevent the infection?

a) By taking bath twice daily [ ]

b) Wearing clean clothes [ ]

c) Wash hands with soap and water [ ]

29. How do you prevent peptic ulcer?

a) By taking adequate food [ ]

b) Avoid stress [ ]

c) Taking medications [ ]

30. How to prevent stress and emotional tension at work?

a) Attending meditation [ ]

b) Taking alcohol [ ]

c) Changing the work section often [ ]

31. What is the common communicable disease that can affect cotton mill workers?

a) Chicken pox [ ]

b) Tuberculosis [ ]

c) measles [ ]

32. Which of the following act that provides benefits to the cotton millworkers?

a) The factories act [ ]

b) The ESI act [ ]

c) Central government act [ ]

SCORING PROCEDURE

Interpretations:

Each correct response carries 1 mark

Each wrong response carries 0 marks.

LEVEL OF KNOWLEDGE	MARKS	PERCENTAGE
Inadequate knowledge	0-11	0-34%
Moderately adequate	12-22	35-69%
Adequate knowledge	23-32	70-100%

KEY

QUESTION NO	ANSWER	QUESTION NO	ANSWER
1	A	17	A
2	A	18	A
3	B	19	B
4	C	20	B
5	C	21	A
6	A	22	A
7	A	23	A
8	B	24	B
9	A	25	C
10	B	26	A
11	A	27	B
12	A	28	C
13	C	29	B
14	C	30	A
15	B	31	B
16	A	32	B

பிரிவு - அ

தனிநபர் பற்றிய அடிப்படை விபரங்கள்

குறிப்பு:

நேர்முகத் தேர்வாளர் பின்வரும் கேள்விகளை கேட்டு மிகவும் பொருத்தமான விடைகளுக்கு (✓) என்ற குறியை எதிரேயுள்ள கட்டத்தில் இடுவார்.

1. வயது வருடங்களில்

அ) 21 - 30 ( )

ஆ) 31 - 40 ( )

இ) 41 - 50 ( )

2. பாலினம்

அ) ஆண் ( )

ஆ) பெண் ( )

3. கல்வித்தகுதி

அ) படிக்காதவர் ( )

ஆ) தொடக்கக்கல்வி ( )

இ) மேல்நிலைக்கல்வி ( )

ஈ) பட்டயப்படிப்பு ( )

உ) பட்டப்படிப்பு அல்லது அதற்கும் மேற்பட்டது ( )

4. தொழில் செய்யும் இடம்

அ) கலக்குதல் துறை ( )

ஆ) துளையிடும் துறை ( )

இ) வரைபடத்துறை ( )

ஈ) தனிமை துறை ( )

உ) நூலறை ( )

5. எவ்வளவு காலமாக இத்துறையில் உள்ளீர்கள்

அ) 5 வருடத்திற்கு கீழ் ( )

ஆ) 5 - 10 வருடங்கள் ( )

இ) 10 வருடத்திற்கு மேல் ( )

6. குடும்பத்தின் மாத வருமானம்

அ) ரூ.5000/- க்கு கீழ் ( )

ஆ) ரூ.5001 - ரூ.10000/- ( )

இ) ரூ.10000/-க்கு மேல் ( )

7. பஞ்சாலையில் வேலை செய்யும் தொழிலாளர்களுக்கு ஏற்படும் பாதிப்புகள் பற்றிய விவரங்களை ஏற்கனவே அறிந்திருப்பவரா?

அ) ஆம் ( )

ஆ) இல்லை ( )

பிரிவு - ஆ

தொழில் சார்ந்த பாதிப்புகளையும் அதன் தடுப்புமுறைகளையும் மதிப்பிடுவதற்கான கட்டுப்பாடான நேர்காணல் அட்டவணை

குறிப்பு:

நேர்முகத் தேர்வாளர் பின்வரும் கேள்விகளை கேட்டு மிகவும் பொருத்தமான விடைகளுக்கு (✓) என்ற குறியை எதிரேயுள்ள கட்டத்தில் இடுவார்.

அ. பொது

1. பருத்தி பஞ்சு தூசியேற்ற நுரையீரல் நோய் என்றால் என்ன?

அ) பஞ்சு தூசியை உள்ளிழுத்தல்

ஆ) தோல் தொற்று

இ) நுரையீரல் அழற்சி

2. பருத்தி பஞ்சு தூசி நுரையீரல் நோயின் மறுபெயர் என்ன?

அ) பழுப்பு நிற நுரையீரல் நோய்

ஆ) கறுப்பு நிற நுரையீரல் நோய்

இ) வெள்ளை நிற நுரையீரல் நோய்

3. கபவாதம் என்றால் என்ன?

அ) இதயத்தில் வீக்கம்

ஆ) நுரையீரலில் வீக்கம்

இ) கல்லீரலில் வீக்கம்

4. காற்றேற்றம் என்றால் என்ன?

அ) வயிற்றில் காற்று உட்புகந்து கொள்ளுதல்

ஆ) மேல்சுவாச குழாயில் தடை

இ) தேவையில்லாத பகுதியில் காற்று அதிகமாக உட்புகுந்து கொள்ளுதல்

5. பஞ்சு தூசியினால் பாதிக்கப்படக்கூடிய உறுப்பு எது?

அ) இதயம்

ஆ) சிறுநீரகம்

இ) நுரையீரல்

6. பஞ்சு ஆலையில் வேலை செய்யும் தொழிலாளர்களுக்கு ஏற்படும் பாதிப்பின் நிகழ்வு எவ்வளவு?

அ) 2,00,000/- வருடம்

ஆ) 1,00,000/- வருடம்

இ) 50,000/- வருடம்

7. பஞ்சு ஆலை தொழிலாளர்களிடம் அதிகமாக காணப்படும் நோய்கள்?

அ) நுரையீரல் சார்ந்த வியாதி

ஆ) தோல் வியாதி

இ) கண் சார்ந்த வியாதி

ஆ. காரணங்கள்

8. பஞ்சு ஆலை தொழிலாளர்களிடம் பொதுவாக பருத்தி பஞ்சு தூசியேற்ற நுரையீரல் நோய் காணப்பட காரணம் என்ன?

அ) பரம்பரையாக வரும் நோய்

ஆ) பஞ்சு தூசுடன் கூடிய நேரடி தொடர்பு

இ) பரவக்கூடிய நோய்

9. பஞ்சு ஆலை தொழிலாளர்களிடம் கபவாதம் ஏற்பட காரணம் என்ன?

அ) நிமோனியா

ஆ) மருந்துகளின் பக்கவிளைவு

இ) இரத்தத்தில் கிருமி தொற்று

10. பஞ்சு ஆலை தொழிலாளர்களிடம் காற்றேற்றம் ஏற்படக் காரணம் என்ன?

அ) வைரஸ் தொற்று

ஆ) அதிக நாட்களாக புகைப்பிடித்தல்

இ) கதிர்வீச்சு

இ) அறிகுறிகள்

11. பஞ்சு ஆலை தொழிலாளர்களிடம் அதிகமாக காணப்படும் நிமோனியாவின் அறிகுறி என்ன?

அ) மூச்சுத்திணறல்

ஆ) சலிப்பு

இ) தற்செயலான உடல் எடை குறைதல்

12. பருத்தி பஞ்சு தூசியேற்ற நுரையீரல் நோயின் அறிகுறிகள் என்னென்ன?

அ) நெஞ்சு இறுக்கம், இருமல், மூச்சிறைத்தல்

ஆ) பசியின்மை, உடல் எடைகுறைதல், சோர்வு

இ) குமட்டல், வாந்தி, மயக்க உணர்வு

13. காற்றேற்ற நோயில் எந்த அறிகுறி மற்றவர்களால் எளிதில் கண்டறிய முடியும்?

அ) மயக்கமடைதல் மற்றும் தலைவலி

ஆ) வலி

இ) தோல் தடிப்பு

ஈ. கண்டறியும் முறைகள்

14. பின்வருவனவற்றுள் எது பருத்தி பஞ்சு தூசியேற்ற நுரையீரல் நோயை கண்டறிய உதவுகிறது?

அ) சி.டி. ஸ்கேன்

ஆ) கதிர்வீச்சு பரிசோதனை

இ) நுரையீரல் செயல்பாட்டு சோதனை

15. கபவாதத்தை எளிதில் கண்டறியும் முறை என்ன?

அ) கதிர்வீச்சு பரிசோதனை

ஆ) நுரையீரல் ஊடு சோதிப்பு

இ) அறுவை சிகிச்சை நுரையீரல்

உ. சிகிச்சை முறை மற்றும் திசுஆய்வு விளைவுகள்

16) பருத்தி பஞ்சு தூசியேற்ற நோய்க்கான சிகிச்சை முறை என்ன?

அ) தொழிலாளியை குறைந்த நோய் தொற்றும் இடத்திற்கு மாற்றவேண்டும்

ஆ) இரத்தச்சிகிச்சை சரியான இடைவெளியில் செய்ய வேண்டும்

ஈ) மேற்பார்வையின் கீழ் தொடர்ச்சியாக மருந்துகளை உட்கொள்ளவேண்டும்

17) இருதய இறுக்கத்தை குறைக்க எந்த மருந்து பயன்படும்?

அ) ஹிஸ்டமைன் எதிர்ப்பு மருந்து மற்றும் நுரையீரலை பெரிதாக்கும் மருந்து

ஆ) நுண்ணுயிரி எதிர்பொருள்

இ) காய்ச்சல் குறைக்கும் மருந்துகள்

18) பருத்தி பஞ்சு தூசியேற்ற நோய்க்கு அதிகமாக வரக்கூடிய பின்விளைவு என்ன?

அ) நீண்ட நாள் மார்புச்சளி

ஆ) நுரையீரல் புற்றுநொய்

இ) காசநோய்

ஊ. தடுப்புமுறை

19) பஞ்சு ஆலை தொழிலாளர்களிடம் பஞ்சு தூசியின் அளவை கட்டுப்படுத்தும் வழிமுறைகள் என்ன?

அ) பாதுகாப்பான சாதனங்கள் உபயோகித்தல் மற்றும் மருத்துவ

ஆலோசனை பெறுதல்

ஆ) புகை விசிறி, காற்றோட்டத்தை மேம்படுத்துதல் மற்றும் ஈரப்படுத்தும் முறை

இ) பஞ்சு தூசி வெளியேறுவதை தடுக்கவேண்டும் மற்றும் வேலையை

நிறுத்தவேண்டும்.

20) கபவாதத்தை தடுக்க முக்கியமான தடுப்புமுறை என்ன?

அ) பழங்களையும் காய்கறிகளையும் சாப்பிடவேண்டும்

ஆ) நிமோனியா தடுப்பூசி போடவேண்டும் மற்றும் புகைப்பிடித்தலை தடுக்கவேண்டும்

இ) புகைப்பிடித்தலின் புகையை தவிர்க்கவேண்டும்

21) காற்றேற்றத்தினை தடுக்க கீழ்கண்ட வழிமுறை என்ன?

அ) புகைப்பிடித்தலை தவிர்த்தல்

ஆ) அடிக்கடி கைகழுவுதல்

இ) அடிக்கடி வேலைக்கு வராமலிருத்தல்

22) பஞ்சு ஆலை தொழிலாளர்களிடம் இருந்து ஊட்டச்சத்து குறைப்பாட்டை தடுக்கும் வழிமுறை என்ன?

அ) சரிவிகித உணவு எடுத்தல்

ஆ) அதிக நீர் உட்கொள்ளுதல்

இ) திடமான உணவு எடுத்தல்

23) தொழிலாளர்களின் ஆரோக்கியம் உயர்நிலை அடைவதற்கான எடுக்கும் முதல் நடவடிக்கைகள் என்ன?

அ) உடல்நலக்கல்வி

ஆ) குடும்ப கட்டுப்பாடு

இ) சுற்றுச்சுழல் பாதுகாப்பு

24) ஒலி மாசினை தடுக்கும் முறைகள் என்னென்ன?

அ) செவிக்செருகி உபயோகித்தல்

ஆ) முகமூடி

இ) ஆலைகளுக்கு அருகில் மரங்களை நடுதல்

25) வேலை செய்யும்போது முகமூடி அணிவதன் பயன்கள் என்ன?

அ) முகத்தில் காயம் ஏற்படுவதை தடுக்கிறது

ஆ) வாயுவிடம் இருந்து பாதுகாக்கிறது

இ) தூசு உள்ளிழுத்தலை தடுக்கிறது

26) இயந்திரத்தினால் விளையக்கூடிய ஆபத்திற்காக முதலுதவி என்ன?

அ) மருத்துவசேவை

ஆ) உடல்நலக்கல்வி

இ) மருத்துவ வசதி

27) தொழிலாளர்கள் முக்கியமாக பின்பற்ற வேண்டிய சுயபாதுகாப்பு தடுப்புமுறை என்ன?

அ) ஆயுதங்களை கவனமாக கையாளுதல்

ஆ) பாதுகாப்பு சாதனங்களை பயன்படுத்துதல்

இ) கட்டிடத்தை சரியாக கட்டுதல்

28) நோய் தொற்றை தடுக்கும் வழிமுறை என்ன?

அ) தினமும் இருமுறை குளித்தல்

ஆ) தூய்மையான உடை அணிதல்

இ) சோப்பை பயன்படுத்தி கைகழுவுதல்

29) குடல் புண்ணை தடுக்கும் வழிமுறை என்ன?

அ) நன்றாக உணவு உட்கொள்ளவேண்டும்

ஆ) மனஅழுத்தத்தை தவிர்க்கவேண்டும்

இ) மருந்துகளை உட்கொள்ளவேண்டும்

30) தொழிலாளர்களிடமிருந்து மன அழுத்தம் மற்றும் மன இறுக்கத்தை தடுக்கும் வழிமுறைகள் என்ன?

அ) ஆலோசனை பெறுதல்

ஆ) மது அருந்தவேண்டும்

இ) ஆழ்ந்த மூச்சு எடுத்தல் மற்றும் தளர்த்துதல்

31) பஞ்சு ஆலை தொழிலாளர்களிடம் பரவலாக காணக்கூடிய தொற்றுநோய்கள் எவை?

அ) அம்மைநோய்

ஆ) காசநோய்

இ) பொண்ணுக்கு வீங்கி

32) தொழிலாளர்களுக்கு சாதகமான சட்டம் எது?

அ) தொழிற்சாலை சட்டம்

ஆ) ஈ.எஸ்.ஐ. சட்டம்

இ) மத்திய அரசு சட்டம்

ANNEXURE - E

STRUCTURED TEACHING PROGRAMME

Topic	:	Occupational hazards and its Prevention
Group	:	60 Cotton mill workers
Venue	:	Kandagiri Spinning Mills, Unit-I, II, III, Udayapatti
Method of teaching	:	Lecture cum discussion
Teaching aids	:	Video
Duration	:	15 - 20 minutes

Central objective :

The cotton mill workers will able to improve knowledge, attitude regarding occupational hazards and to practice protective measures at work.

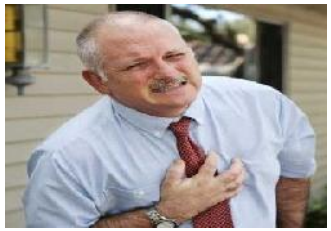
Specific objectives:

On completion of this teaching session, the cotton mill workers will be able to,

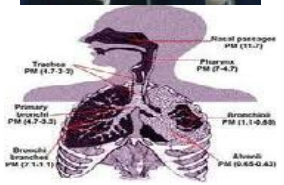
- define occupational health
- define occupational hazards
- mention the incidence rate
- discuss about occupational hazards
- enlist the measures for health protection of workers
- describe the prevention of occupational hazards

Time	Specific objective	Content	A.v Aids	Teacher & learner activity
1 Mt		**INTRODUCTION** The work is considered a basic part of our life. Most adults spend approximately one fourth to one third of their time at work and often perceive work as a part of their self identify. The workplace has significant influence on individual's health and is a primary site for the delivery of preventive health care. Cotton industry workers are exposed to various hazards in the different departments of textile factories especially in the spinning and weaving sections which play a major role in the high incidence of industrial health hazards. The major health problems associated with cotton dust are respiratory problems, which include byssinosis, pneumonitis and emphysema. The problems are highly prevalent in the mills of developing countries.		Introduction to the topic.
1 Mt	define occupational health	**DEFINITIONS** "Occupational health should aim at the promotion and maintenance of the highest degree of physical, mental and social well being of workers in all occupations".		**Teacher**: defining the occupational health. **Learner**: Listens.

1 Mt	define occupational hazards	"A working condition that can lead to illness or death. Often, people in jobs which pose a high level of risk are paid more than similar but less risky jobs to compensate for the danger involved".		**Teacher**: Defining the occupational hazards. **Learner**: Listens
1 Mt	Mention the incidence rate.	**INCIDENCE** The world wide incidence of occupational hazards among cotton mill worker 200,000lakhs/ Year.		**Teacher**: Mention the incidence. **Learner**: Listens.
20 Mts	Discuss the Occupational hazards	**OCCUPATIOAL HAZARDS:** The main occupational hazards are: 1.Byssinosis 2.Pneumonitis 3.Emphysema I. **Byssinosis:** Byssinosis also called "Brown lung diseases" is an occupational lung disease caused by inhalation of cotton dust in working environment.		**Teacher:** Discuss the occupational hazards. **Learner**: Listens,

		Causes: ✓ Smoking ✓ Direct contact with cotton dust ✓ A history of asthma ✓ **Signs and symptoms:** ✓ Chest tightness ✓ Cough ✓ Wheezing ✓ Breathing difficulty ✓ Allergy	    	

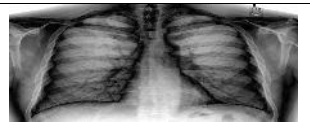
		Diagnostic evaluation: Byssinosis is detected through: ✓ A detailed medical history ✓ Physical examination ✓ Chest x-ray ✓ Pulmonary function tests **Treatment:** 1.Reducing exposure is essential 2. Any worker who has symptoms of byssinosis or who has trouble breathing should transfer to a less-contaminated area. 3. Antihistamine to reduce the tightness in the chest. Eg.Avil 4. Bronchodilators used to relax breathing passages and improve air flow. Eg: Deriphylline.	    	

		Prevention: 1. Eliminating exposure to cotton dust is the surest way to prevent byssinosis. 2. Using exhaust fan improving ventilation and wetting procedures are very successful methods of controlling dust levels to prevent byssinosis. **3.** Prevent exposure to contamination. **II. Pneumonitis:** Pneumonitis or pulmonitis is a general term that refers to inflammation of lung tissue. **Causes:** ✓ Viral infection ✓ Pneumonia	   	

	.	✓ Radiation therapy ✓ Sepsis ✓ Smoking ✓ Adverse reaction to medications ✓ Inhalation of chemicals **Signs and symptoms:** The most common sign of pneumonitis is **shortness of breath.** Other symptoms are: ✓ Cough ✓ Fatigue ✓ Loss of appetite ✓ Unintentional weight loss ✓ Chest pain	     	

		Diagnostic evaluation: ➢ Sputum test ➢ Chest x-ray ➢ Ct scan ➢ Pulmonary function test ➢ Bronchoscopy ➢ Surgical lung biopsy **Treatment:** 1. Eliminating exposure to the allergen or chemical irritating lungs. 2. Administer corticosteroids, Antibiotics, Oxygen therapy. **Prevention:** ✓ Avoid smoking ✓ Avoid exposure to secondary smoking ✓ Wash your hands frequently	     	

		III. EMPHYSEMA: A condition in which air is abnormally present within the body tissues. **Causes:** ✓ Smoking ✓ Regular tobacco taking ✓ Exposure to air pollutions coal and silica dust. **Sign and symptoms:** A Symptom is something the patient feels and describes, such as pain, while sign is something everybody can detect, such as a **rash.** **Other symptoms are:** ✓ Shortness of breath ✓ Cough ✓ Wheezing.	    	

		Diagnostic evaluation: ✓ Chest x-ray ✓ CT Scan ✓ Blood test ✓ Lung function test **Treatment:** ➢ Avoid smoking ➢ Administer Bronchodilators, Antibiotics, and Oxygen therapy. **Prevention:** 1.Don't smoke 2. Avoid breathing secondhand smoke .3. Wear a mask to protect your lungs if you work with chemical fumes or dust	    	

10 Mt	enlist the measures for health protection of workers	**MEASURE FOR HEALTH PROTECTION OF WORKERS** 1. The aim of occupational health is "the promotion and maintenance of the highest degree of physical, mental and social well being of workers in all occupations" 2. ESI act is the most important act which helps for employees benefit. 3. The measures for the general health protection of workers were the subject of discussion by an ILO/ WHO committee on occupational health in 1953. The committee recommended the following, **1) Nutrition** ✓ In many developing countries malnutrition is an important factor contributing to poor health among workers and low work productivity ✓ . The aim is to provide balanced diets and snacks at reasonable cost under sanitary control. ✓ It is important to combine this action with the education of the workers on the value of a balanced diet.		**Teacher**: enlist the measures for health protection of workers **Learner**: listens, clarify the doubts.

10Mts	describe the prevention of occupational	**2. Communicable disease control** ✓ The industry provides an excellent for early diagnosis, treatment, prevention and rehabilitation. ✓ There should be an adequate immunization program against preventable communicable diseases. ✓ The communicable diseases of special importance in India are TB, typhoid fever, viral hepatitis, , malaria and venereal diseases. **3.Health education:** ✓ Health education is a basic health need. ✓ It is an important health promotional measure. **PREVENTION OF OCCUPATIONAL HAZARDS** **1.PHYSICAL HAZARDS:** Noise: Use personal protective measures like ear plugs and helmet to avoid excessive noise.	 	**Teacher**: describe the prevention of occupational hazards.

	hazards	**2.CHEMICAL HAZARDS:** ❖ **Dust** Use personal protective measures like using mask, goggles to prevent Inhalation of dust. **3.MECHANICAL HAZARDS:** ❖ **Accidents** ✓ Building planning a) Floors must be non slippery type b) Enough space to move easily c) Easy access of workers to the safety switches. ✓ Safe material handling a) All material handling equipments should be repaired and maintained properly. ✓ Personal protective devices a) Protection of head by using helmets	 	**Learner**: listens, Answering the questions.

		b) Ears by using ear plugs. c) Face by using face masks. **4.BIOLOGICAL HAZARDS:** ❖ **Infective and parasitic agents** ✓ Elimination of the source of contamination is fundamental to the prevention and control of biological hazards. ✓ Engineering controls such as improvement of ventilation partial isolation of the contamination source, installation of negative pressure and separate ventilation and air conditioning system and the use of ultra violet lamps can help contain spread of contaminants. ✓ If the contact with biological hazards cannot be prevented, the employees must use personal protective equipment and adhere strictly to the practice of wash hands with liquid soap to prevent the infection. ✓ Protective equipment includes masks,	 	

1Mt		gloves, protective clothing, eye shields, face shields and shoe covers. **5.PSYCHOSOCLAL HAZARDS:** ❖ **Stress** ✓ Control physical hazards such as noise, that contribute to stress ✓ Avoid stress to prevent peptic ulcer. ✓ Laughing is one of the easiest best ways to reduce stress. ✓ Learn to relax, take several deep breaths throughout the day **Conclusion:** Occupational hazards and injuries among cotton mill workers are a frequent Occurrence. There is need for sustained public awareness campaigns among the workers and management on the importance of occupational safety to guide against injuries/ accidents at work sites and compliance to the use of protective devices. It is also recommended that the Inspectorate Division of Federal Ministry of Industries should pay periodic monitoring visits to industries in order to ensure a		

1Mt		conducive and a safe working environment and also with the facility Act and related laws so as to curtail the rate of accidents and injuries in the industries. **Evaluation:** 1. What is byssinosis? 2. What are the signs and symptoms of pneumonitis? 3. What are the preventive measures for emphysema? 4. What are the General measures used to protect the workers? 5.How will you prevent inhalation of cotton dust?		

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தொழில் சார்ந்த பாதிப்புகள் மற்றும் தடுக்கும் முறைகள்

தலைப்பு : தொழில் சார்ந்த பாதிப்புகள் மற்றும் தடுக்கும் முறைகள்

குழு : பஞ்சு ஆலை தொழிலாளர்கள்

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நடத்தும் முறை : சொற்பொழிவிலிருந்து கலந்துரையாடல்

பயிற்சி உதவிகள் : பேசும்படம்

காலஅளவு : 15-20 நிமிடங்கள்

மத்திய குறிக்கோள் :

பஞ்சு ஆலை தொழிலாளர்கள் தொழில் சார்ந்த பாதிப்புகளை பற்றி தங்களது அறிவுத்திறனையும், மனப்பான்மையையும் வளர்த்து கொள்வதுடன் பாதுகாப்பு நடவடிக்கைகளை வேலை செய்யும்போது பின்பற்றுவதும் ஆகும்.

திட்டவட்டமான/ குறிப்பிட்ட குறிக்கோள்:

இந்த பயிற்சி வகுப்பு முடியும் போது பஞ்சு ஆலை தொழிலாளர்கள்,

- தொழில்சார்ந்த ஆரோக்கியத்தை வரையறுத்தல்
- தொழில்சார்ந்த பாதிப்புகளை வரையறுத்தல்
- நிகழ்வுகளை குறிப்பிடுக
- தொழில்சார்ந்த பாதிப்புகள் பற்றி கலந்துரையாடுதல்
- தொழிலாளர்களுக்கான பாதுகாப்பு நடவடிக்கைகளை பட்டியலிடுக.
- தொழில் சார்ந்த பாதிப்புகளை தடுக்கும் முறைகளை விவரித்தல்

நேரம்	குறிக்கோள்	பொருளடக்கம்	ஒலி/ஒளி பயன்பாடு	கற்பிப்பவர் / கற்பவர் செயல்பாடுகள்
1 நிமிடம்

1 நிமிடம் 1 நிமிடம் 20 நிமிடங்கள்	தொழில் சார்ந்த பாதிப்புகளை வறையறுத்தல் நிகழ்வுகளை குறிப்பிடுக. தொழில் சார்ந்த பாதிப்புகளை கலந்துரையாடுதல்	தொழில் ஒரு மனிதனை நோய்கள் (அ) சாவிற்கு கொண்டு செல்கிறது. சிறுதொழிலும் கூட அதிகளவு பாதிப்பு இருக்க வாய்ப்பிருக்கிறது. **நிகழ்வுகள்** நூற்றாலை தொழிலில் ஒரு ஒரு வருடத்திற்குள் உலக அளவில் 2 லட்சம் மக்கள் பாதிப்படைகிறார்கள். **தொழில் சார்ந்த பாதிப்புகள்** முக்கியமான தொழில் சார்ந்த பாதிப்புகள் ➢ பருத்தி பஞ்சு தூசியேற்ற நுரையீரல் நோய் ➢ கபவாதம் ➢ காற்றேற்றம் **1) பருத்தி பஞ்சு தூசியேற்ற நுரையீரல் நோய்** பருத்தி பஞ்சு தூசியேற்ற நுரையீரல் நோய் என்பது பழுப்பு நிற நோயாகும். இந்நோய் பஞ்சு தூசியை உள்ளிழுப்பதால் உருவாகிறது.		கற்றுக்கொள்பவர் கவனித்தல் கற்பிப்பவர்: தொழில்சார்ந்த பாதிப்புகளை கலந்துரையாடுதல் கற்றுக்கொள்பவர்: கவனித்தல்

		காரணங்கள் 1. புகைப்பிடித்தல் 2. பஞ்சு தூசுடன் நேரடி தொடர்பு 3. ஆஸ்துமா **அறிகுறிகள்** 1. நெஞ்சு இறுக்கம் 2. இருமல் 3. மூச்சிறைத்தல் 4. மூச்சு திணறல் 5. ஒவ்வாமை **கண்டறியும் முறை** 1. முழு மருத்துவ விபரம் 2. உடல் பரிசோதனை 3. நெஞ்சு கதிர்வீச்சு சோதனை 4. நுரையீரல் செயல்பாட்டு சோதனை		

		சிகிச்சை 1. ஒத்துக்கொள்ளாத பொருட்களை தவிர்க்கவேண்டும். 2. நோயாளியை குறைந்த நோய்தொற்று பகுதிக்கு மாற்ற வேண்டும். 3. நெஞ்சு இறுக்கத்தை தவிர்க்க ஹிஸ்டமைன் எதிர்ப்பு மருந்து அளிக்கவேண்டும். **தடுப்புமுறை** ➢ பஞ்சு தூசிகளை தவிர்க்கவேண்டும். ➢ புகை மின்விசிறியை உபயோகித்து காற்றோட்டத்தை மேம்படுத்தலாம் மற்றும் தூசை நனைத்தலின் மூலம் பஞ்சு தூசியேற்ற நுரையீரல் நோயை தடுக்கலாம். ➢ மாசுபடுதலை தவிர்க்கவேண்டும். **2) கபவாதம்** கபவாதம் என்பது நுரையீரல் திசுக்கள் வீங்கிய நிலையாகும். **காரணங்கள்** ➢ வைரஸ் தாக்குதல் ➢ நுரையீரல் வீக்கம்		

		➢ கதிர்வீச்சு சிகிச்சை ➢ நோய் தொற்று ➢ புகைப்பிடித்தல் ➢ மருந்துகளில் பக்க விளைவுகள் ➢ வேதியியல் பொருட்களை உட்கொள்ளுதல் **அறிகுறிகள்** ➢ மூச்சு திணறல் தான் முக்கியமான அறிகுறியாகும். ➢ இருமல் ➢ உடல் அலுப்பு ➢ பசியின்மை ➢ தற்செயலான உடல் எடை குறைவு ➢ நெஞ்சுவலி **கண்டறியும் முறை** ➢ சளி பரிசோதனை ➢ கதிர்வீச்சு பரிசோதனை ➢ சி.டி. ஸ்கேன் ➢ நுரையீரல் செயல்பாட்டு பரிசோதனை ➢ நுரையீரல் உளடு சோதிப்பு ➢ நுரையீரல் திசு ஆய்வு		

		சிகிச்சை முறை ➢ வேதியியல் பொருட்கள் மற்றும் ஒவ்வாமையில் இருந்து விடுபடவேண்டும். ➢ நுண்ணுயிரி எதிர்பொருள், உயிர்வளி சிகிச்சை அளிக்க வேண்டும். **தடுக்கும் முறை** ➢ புகைப்பிடித்தலை தவிர்க்கவேண்டும். ➢ புகையிலை மற்றும் புகைப்பிடிக்கும் இடத்தையே தவிர்க்கவும். ➢ அடிக்கடி கை கழுவவேண்டும். **3) காற்றேற்றம்** உடல்திசுக்களில் சாதாரண நிலையைவிட அதிகமான நிலையில் காற்று நிறைந்து இருத்தல் **காரணங்கள்** • புகைப்பிடித்தல் • புகையிலை பயன்படுத்துதல்		

		• சிலிக்கா தூசி மற்றும் காற்று மாசுபடுதலில் இருந்து தவிர்க்கவேண்டும். **அறிகுறிகள்** • தோல் தடுப்பை அனைவராலும் எளிதாக கண்டறியமுடியும். **வேறு அறிகுறிகள்** • மூச்சிறைத்தல் • இருமல் • மூச்சுவிட திணறல் **கண்டறியும் முறை** • கதிர்வீச்சு பரிசோதனை • சி.டி. ஸ்கேன் • இரத்தப்பரிசோதனை • நுரையீரல் குழாய் பரிசோதனை		

10 நிமிடங்கள்		**சிகிச்சைமுறை** • புகைப்பிடித்தலை தவிர்க்கவும் • மூச்சுக்குழாய் தளர்த்தி, நுண்ணுயிரி எதிர்பொருள் உயிர்வளி சிகிச்சை உபயோகித்தல் **தடுக்கும் முறை** • புகைப்பிடித்தலை தவிர்க்க வேண்டும் மற்றும் புகைப்பிடித்தலின் புகையை தவிர்க்கும். • பாதுகாப்புச் சாதனங்களைப் பயன்படுத்த வேண்டும் (எ.கா) முகமூடி அணிதல் **தொழிலாளர்களுக்கு ஆரோக்கியமான பாதுகாப்பு நடவடிக்கைகள்** • தொழில்தான் ஒரு மனிதனுடைய உடல், மனம் மற்றும் சமூக பழக்க வழக்கங்களை மேம்படத்தி பாதுகாக்கிறது. • ஈ.எஸ்.ஐ சட்டம் என்பது தொழிலாளர்களுக்கு நன்மைகள் தரும் ஒரு முக்கியமான சட்டம் ஆகும். • உலக ஆரோக்கிய மையம் மற்றும் உலக தொழிலாளர்கள் தொகுத்து வைத்துள்ள நிபந்தனைகள் பின்வருமாறு.		கற்பிப்பவர்: தொழிலாளர்களுக்கு உடல்நிலை பாதுகாப்பு நடவடிக்கைகளை பட்டியிடுதல் கற்றுக்கொள்பவர்: கவனித்தல்

		1) உணவு நிறைய வளரும் நாடுகளில் ஊட்டச்சத்து குறைபாடு தான் தொழிலாளர்களை பாதிக்கும் ஒரு முக்கியமான காரணி ஆகும். ஊட்டச்சத்து குறைபாட்டினால் உடல்நிலை பாதிக்கப்படுகிறது மற்றும் வேலை திறன் குறைகிறது. 2. குறைந்த விலையில் தொழிலாளர்களுக்கு சரிவிகித உணவு சுகாதார முறையை அளிப்பது ஒரு முக்கிய லட்சியமாகும். 3. சரிவிகித உணவை பற்றிய அறிவை பெருக்கவேண்டும். **2) பரவக்கூடிய நோய்கள் கட்டுப்படுத்தும் முறைகள்** தொழிற்சாலையில் தொழிலாளர்களுக்கு விரைவிலேயே நோய் கண்டறியும் முறை, சிகிச்சை, தடுப்பு முறைகள், மற்றும் மறுவாழ்வு ஆகியன அளிக்கப்படவேண்டும். பரவக்கூடிய நோயினை தடுக்க தடுப்பூசி பின்பற்றப்பட வேண்டும். காசநோய், டைபாய்டு, மலேரியா மற்றும் மற்ற நுண்ணுயிரி தொற்றுநோய்கள் தொழிலாளர்களுக்கு அதிகமாக பரவும் வாய்ப்பு உள்ளது.		

10 நிமிடங்கள்		**3) உடல்நலக்கல்வி** உடல்நலக்கல்வி என்பது அடிப்படை உடல் தேவை. உடல்நலக்கல்வி என்பது முக்கியமான ஆரோக்கியத்தை மேம்படுத்த உதவுகிறது. **தொழில் சார்ந்த பாதிப்புகளை தடுக்கும் முறைகள்** **1) உடல் சார்ந்த பாதிப்புகள்** **ஒலி/ சப்தம்** செவிச்செரு, தலைகவசம் போன்ற பாதுகாப்பு நடவடிக்கைகளை மேற்கொள்வதன் மூலம் அதிக சப்தத்திலிருந்து நம்மை பாதுகாத்து கொள்ளலாம். **2) வேதியியல் பாதிப்புகள்** **தூசு** கண்கவசம் மற்றும் முகமூடிகளை உபயோகிப்பதன் மூலம் தூசு உள்ளிழுப்பதை தடுக்கலாம்.		கற்பிப்பவர்: தொழில் சார்ந்த பாதிப்புகளை தடுக்கும் முறைகளை விளக்குதல் கற்றுக்கொள்பவர்: கவனித்தல்

		3) இயந்திரம் சார்ந்த பாதிப்புகள் **விபத்து** **திட்டப்படுத்துதல்** அ) தரைகள் வழுக்கி விடுவதாக இருக்கக்கூடாது. ஆ) சுலபமாக நகருவதற்கு தேவையான இடமிருக்கவேண்டும். **பாதுகாப்பான சாதனங்கள் கையாளுதல்** அ) அனைத்து வகை சாதனங்களம் சீரான நிலையில் இருத்தல் வேண்டும். **சுய பாதுகாப்பு உபகரணங்கள்** அ) தலையை தலைகவசத்தை கொண்டு பாதுகாக்கவேண்டும். ஆ) காதை செவிச்செருகி கொண்டு பாதுகாக்கவேண்டும். இ) முகத்தை முகமூடி கொண்டு பாதுகாக்கவேண்டும். **4) உயிரிய பாதுகாப்புகள்** **நோய்தொற்று மற்றும் நுண்ணுயிரி கிருமிகள்** நோயை ஆரம்ப இடத்திலிருந்து நீக்குவதே நோயை கட்டுப்படுத்த மற்றும் எடுக்கும் அடிப்படை நடவடிக்கை.		

1 நிமிடம்		காற்றோட்டத்தை மேம்படுத்துவதின் மூலமாகவும் நோய் தொற்றை தடுக்கலாம். உயிரிய பாதிப்புகளை தடுக்க, தொழிலாளர்கள் சுயபாதுகாப்பு உபகரணங்களை பயன்படுத்தவேண்டும் மற்றும் திரவ சோப்பை உபயோகித்து கைகழுவ வேண்டும். முகமூடி, கைக்கவசம், பாதுகாப்பான உடை, கண்கவசம், கால் கவசம் ஆகிய பாதுகாப்பான உபகரணங்களை பயன்படுத்தவேண்டும். **5) மன சமூக பாதிப்புகள்** **மன அழுத்தம்** 1. மன அழுத்தத்தை உருவாக்கக்கூடிய அதிக ஒலி, ஒளி மற்றும் சாதனங்களையும் கட்டுப்படுத்தவேண்டும். 2. குடல் புண்ணை உருவாக்கக்கூடிய மன அழுத்தத்தை தவிர்க்கவேண்டும். 3. மன அழுத்தத்தை தடுக்க சிறந்த வழி சிரிப்பது. 4. ஆழ்ந்து மூச்சு எடுத்தல் மற்றும் தளர்த்துதல் ஆகியவற்றை நேரம் கிடைக்கும் போதெல்லாம் செய்யவேண்டும்.		

1 நிமிடம்		**முடிவுரை** தொழில் சார்ந்த பாதிப்புகள் மற்றும் காயங்கள் பஞ்சு ஆலை தொழிலாளர்களுக்கு அடிக்கடி நிகழ்வதாகும். மக்களுக்கு தொழில் சார்ந்த விழிப்புணர்வு தேவை மற்றும் தொழில் செய்யும் இடத்தில் காங்கள் மற்றும் விபத்துக்கள் ஏற்பட்டால் கையாளவும் தெரிய வேண்டும். பாதுகாப்பு முறைகளை அரசு கண்காணிக்கும் பிரிவு ஒழுங்கான இடைவெளியில் பரிசோதிக்கவேண்டும். **மதிப்பிடுதல்** 1. பஞ்சு தூசியேற்ற நுரையீரல் நோய் என்றால் என்ன? 2. கபவாதத்தின் அறிகுறிகள் என்ன? 3. காற்றேற்றத்தை தடுக்கும் முறைகள் என்ன? 4. தொழிலாளர்கள் தங்களை பாதுகாத்துக்கொள்ள எடுக்க வேண்டிய பொது நடவடிக்கைகள் என்னென்ன? 5. பஞ்சு தூசி உள்ளிழுப்பதை எப்படி தடுப்பது?		

ANNEXURE-F

CERTIFICATE OF VALIDATION

This is to certify that the tool developed by **Ms. Mary Asha**, Final year M.Sc. Nursing student of Sri Gokulam College of Nursing, Salem (affiliated to The Tamil Nadu Dr. M.G.R. Medical University) is validated and can proceed with this tool and content for the main study entitled **"A Study to assess the Effectiveness of Video Assisted Teaching Programme on Knowledge Regarding Occupational Hazards and its Prevention among Cotton Mill Workers at Selected Industries, Salem".**

Signature with Date

ANNEXURE - G

LIST OF EXPERTS

1. **Dr.G.Prakash, M.D.,**
   Consultant community Medicine
   Sri Gokulam Hospital, Salem.
2. **Dr.Prabu Ram Naath, M.D.,**
   Consultant Pulmonologist,
   Sri Gokulam Hospital, Salem.
3. **Dr.D.Manivannan Ph.D. (N),.**
   Principal,
   Chithrai College of Nursing,
   Madurai.
4. **Mrs. K.Amudha, M.Sc. (N),.**
   Associate Professor,
   Community Health Nursing,
   KMCH.College of Nursing,
   Coimbatore.
5. **Mrs. H.Maaya, M.Sc. (N),.**
   Vice Principal & Head of the Dept,
   Community Health Nursing,
   Sri Bharani College of Nursing,
   Salem.
6. **Mrs.S.Malathi, M.Sc. (N),.**
   Associate Professor,
   Community Health Nursing,
   Vinayaga mission Annapurna College of Nursing,
   Salem.
7. **Mrs. Sivalakshmi, M.Sc(N).,**
   Associate Professor,
   Community Health Nursing,
   Sacred Heart College of Nursing,
   Madurai.

CERTIFICATION OF VALIDATION

This is to certify that the tool developed by **Ms. Mary Asha. A,** Final year M.Sc. Nursing student of Sri Gokulam College of Nursing, Salem (Affiliated to Dr.M.G.R. Medical University, Chennai) is validated and proceed with this tool and content for the main study entitled " A Study to Assess the Effectiveness of Video Assisted Teaching Programme on Knowledge regarding Occupational Hazards and its Prevention among Cotton Mill Workers at Selected Industries, Salem".

Signature with Date

DR. PRAKASH

Dr.[illegible] M.Sc., M.D.S., DPH., MIPHA.,
[illegible],
Consultant Community Medicine,
Sri Gokulam Hospital,
SALEM-4.

CERTIFICATION OF VALIDATION

This is to certify that the tool developed by **Ms. Mary Asha. A,** Final year M.Sc. Nursing student of Sri Gokulam College of Nursing, Salem (Affiliated to Dr.M.G.R. Medical University, Chennai) is validated and proceed with this tool and content for the main study entitled " A Study to Assess the Effectiveness of Video Assisted Teaching Programme on Knowledge regarding Occupational Hazards and its Prevention among Cotton Mill Workers at Selected Industries, Salem".

19/7/13.

Signature with Date

CERTIFICATION OFVALIDATION

This is to certify that the tool developed by **Ms.Mary Asha.A,** Final year M.Sc(Nursing)student of Sri Gokulam College of Nursing, Salem (Affiliated to Dr.M.G.R.Medical University) is validated and proceed with this tool and content for the main study entitled "**A Study to Assess the Effectiveness of Video Assisted Teaching Programme on Knowledge regarding Occupational Hazards and its Prevention among Cotton mill Workers at Selected Industries, Salem**".

18/2/13

Signature with Date

PRINCIPAL
CHITHIRAI COLLEGE OF NURSING
MADURAI -9

CERTIFICATION OF VALIDATION

This is to certify that the tool developed by **Ms. Mary Asha. A,** Final year M.Sc. Nursing student of Sri Gokulam College of Nursing, Salem (Affiliated to Dr.M.G.R. Medical University, Chennai) is validated and proceed with this tool and content for the main study entitled " A Study to Assess the Effectiveness of Video Assisted Teaching Programme on Knowledge regarding Occupational Hazards and its Prevention among Cotton Mill Workers at Selected Industries, Salem".

19/7/13.

Signature with Date

CERTIFICATION OF VALIDATION

This is to certify that the tool developed by **Ms. Mary Asha, A,** Final year M.Sc. Nursing student of Sri Gokulam College of Nursing, Salem (Affiliated to Dr.M.G.R. Medical University, Chennai) is validated and proceed with this tool and content for the main study entitled " A Study to Assess the Effectiveness of Video Assisted Teaching Programme on Knowledge regarding Occupational Hazards and its Prevention among Cotton Mill Workers at Selected Industries, Salem".

10/7/13.

Signature with Date

[Mrs. S. MALATHI

CERTIFICATION OFVALIDATION

This is to certify that the tool developed by **Ms.Mary Asha.A,** Final year M.Sc(Nursing)student of Sri Gokulam College of Nursing, Salem (Affiliated to Dr.M.G.R.Medical University) is validated and proceed with this tool and content for the main study entitled "**A Study to Assess the Effectiveness of Video Assisted Teaching Programme on Knowledge regarding Occupational Hazards and its Prevention among Cotton mill Workers at Selected Industries, Salem**".

Signature with Date

CERTIFICATION OFVALIDATION

This is to certify that the tool developed by **Ms.Mary Asha.A,** Final year M.Sc(Nursing)student of Sri Gokulam College of Nursing, Salem (Affiliated to Dr.M.G.R.Medical University) is validated and proceed with this tool and content for the main study entitled "**A Study to Assess the Effectiveness of Video Assisted Teaching Programme on Knowledge regarding Occupational Hazards and its Prevention among Cotton mill Workers at Selected Industries, Salem**".

19/7/18.

Signature with Date

ANNEXURE – H

FORMULAS USED IN THE STUDY

Reliability of the tool

Reliability of the tool was measured by test retest method among 10 cotton mill workers. This is estimated by administration of tool to 10 cotton mill workers at two different occasion. Scores are compares and calculated by using the equation,

$$r = \frac{\Sigma xy - \frac{\Sigma x \Sigma y}{n}}{\sqrt{\left[\frac{\Sigma x^2 - (\Sigma x)^2}{n}\right]\left[\frac{\Sigma y^2 - (\Sigma y)^2}{n}\right]}}$$

Formula for mean

Formula for mean is

$$\bar{x} = \frac{\Sigma fx}{N}$$

Here

$\bar{x}$ = mean

x = variable

f = frequency

N = Σf = Total frequency

Formula for Standard deviation

Formula for standard deviation is

$$\pm = \sqrt{\frac{\Sigma x^2}{N} - \left(\frac{\Sigma x}{N}\right)^2}$$

σ = standard deviation

Here N, = Total number of observation

Formula for paired 't' test:

Test statistics (t) = $\frac{\overline{d}}{\frac{S}{\sqrt{n}}} \sim tn-1$

Here,

$$\overline{d} = \frac{\Sigma d}{n}$$

d = x-y, is the difference between the two sample observation.

n = sample size

s = $\sqrt{\frac{1}{n-1}\Sigma(d-\overline{d})^2}$

Formula for Unpaired 't' test

$$t = \frac{\overline{x_1} - \overline{x_2}}{S\sqrt{\frac{1}{n_1} + \frac{1}{n}}}$$

$$S = \sqrt{\frac{\Sigma\left(x_1 - \overline{x_1}\right)^2 + \Sigma\left(x_2 - \overline{x}_2\right)^2}{n_1 + n_2 - 2}}$$

Test for association of attributes

Test statistics (¡ ^{2}) = $\sum \frac{(O-E)^2}{E} \sim \chi^2_{(m-1)\,(n-1)}$

Here,

'm' denotes the number of rows, n denotes the number of columns of m ×n contingency table

'O' denotes observed frequency

'E' denotes the expected frequency

ANNEXURE-I

CERTIFICATE OF EDITING

TO WHOMSOEVER IT MAY CONCERN

Certified that the dissertation paper titled “A study to assess the effectiveness of video assisted teaching programme on knowledge regarding occupational hazards and its prevention among cotton mill workers at selected industries, Salem”. by Ms.MARY ASHA.A, It has been checked for accuracy and correctness of English language usage and that the language used in presenting the paper is lucid, unambiguous free of grammatical or spelling errors and apt for the purpose.

03.01.2014
Signature with date
P.G. Assistant in English
Municipal Girls Hr. Sec. School,
GUGAI, SALEM - 636 006.

CERTIFICATE OF EDITING

TO WHOMSOEVER IT MAY CONCERN

Certified that the dissertation paper titled “A study to assess the effectiveness of video assisted teaching programme on knowledge regarding occupational hazards and its prevention among cotton mill workers at selected industries, Salem”. by Ms.MARY ASHA.A, It has been checked for accuracy and correctness of Tamil language usage and that the language used in presenting the paper is lucid, unambiguous free of grammatical or spelling errors and apt for the purpose.

03.01.2014

Signature with date

Municipal Girls Hr. Sec. School,
GUGAI, SALEM - 636 006.

ANNEXURE-J

PHOTOS

The investigator conducting pre and post test

The investigator giving Video Assisted Teaching Programme

The investigator giving video Assisted Teaching Programme

The investigator Providing CD to the participants